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The NATIONAL ELEMENTARY PRINCIPAL

BULLETIN OF THE DEPARTMENT OF ELEMENTARY SCHOOL PRINCIPALS
NATIONAL EDUCATION ASSOCIATION

Entrance, Parker School, Kansas City, Kansas

Volume XXV, No. 5

April, 1946

Acknowledgement

This issue of *The National Elementary Principal* was compiled by the NEA Research Division. It is offered as an additional service to the members of the Department.

One approach in locating the examples used in the present bulletin was to examine a number of articles on recently built school plants. Particular attention was given to articles in *The American School Board Journal*, *The Nations Schools*, and *The School Executive's Magazine*. In each case the authors chosen were asked to prepare new manuscripts, and to provide the necessary illustrations. Acknowledgement of aid is made to the three magazines listed, to the authors, and to others who participated in the project.

THE NATIONAL ELEMENTARY PRINCIPAL

BULLETIN OF THE DEPARTMENT OF ELEMENTARY SCHOOL PRINCIPALS

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Associate membership may be had by all members of the National Education Association who are actively engaged in any phase of school work by paying the regular membership fee of $3. They are entitled to all privileges except the right to vote and hold office.

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Eva G. Pinkston, Editor

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(The Contents of this Bulletin are listed in the Education Index)

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Volume XXV, No. 5 April, 1946

(Twenty-fifth Year of Publication)

We Present

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Cooperative Planning Needed

JUST PRIOR to World War II many of the advances made in home construction had come about through cooperative planning. Architects and engineers no longer buried themselves in their "ivory towers" while drafting plans. Instead they went out to study how people lived in their homes. They asked housewives for suggestions on ways to make homes efficient and attractive. They studied the interests and needs of children. They even gave some consideration to "the lord and master" and his desires. They built model houses for exhibit and discussion purposes. They tested equipment and materials in laboratories. The result was better homes through consumer participation.

The present bulletin is based upon a similar thesis. It is believed that principals should have a place in designing the elementary schools of tomorrow. Classroom teachers, working directly with children, know how building arrangements and equipment may help or hinder learning procedures. Children themselves have ideas that should be recognized. Parents and other citizens are becoming increasingly interested in school buildings useful for many community purposes. All of these sources of information and creative purpose should be brought to bear upon schoolhouse planning.

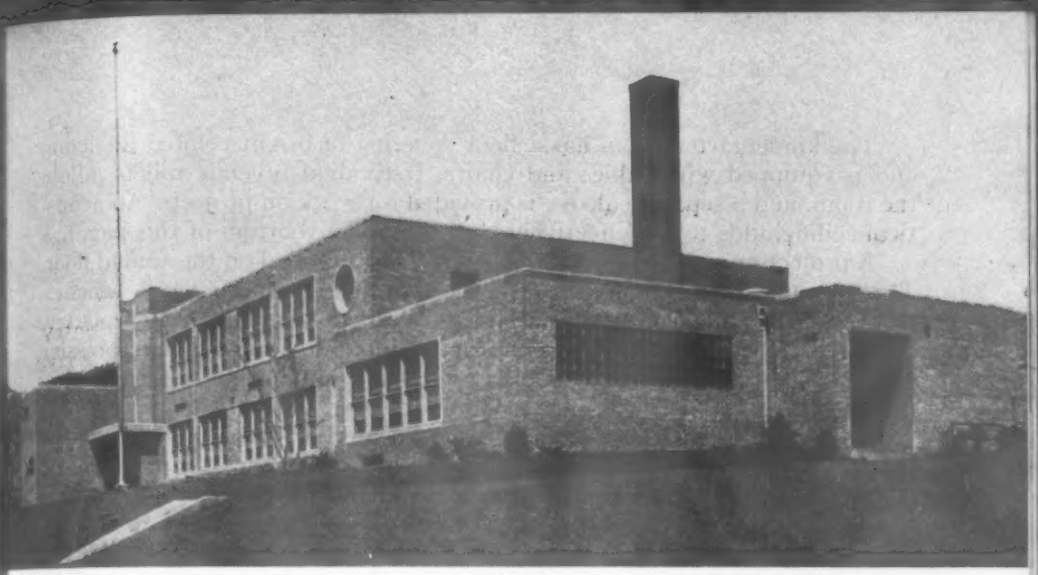
The next few years will be critical ones for school systems. Prior to the War many buildings were obsolete and others were needed in new residential areas. Yet it was necessary during the emergency to stop most school construction. Today there is a pent-up demand for new buildings at a time when there is a shortage of construction materials and labor. Bonds voted before the War and estimates of building costs must be revised to meet higher costs. All of these factors add up to—delay.

Yet there are possible advantages in the delay. Perhaps we have learned some lessons from the war period with respect to school organization and new building materials. Perhaps we have learned new ways to work together in planning. If we are wise the next few years will not be wasted in fretting but will be used to prepare better plans.

The present bulletin is not offered as a complete guide to better buildings. The following pages will, however, help many to pick up "the threads" that were being woven into patterns just prior to the War. The first nine articles briefly describe certain interesting building plans. They have been chosen partly because they illustrate plants in large communities and in small cities; one story and three story buildings; relatively temporary construction and buildings of permanence; simple design and complex structures. Nearly all of the plans have unique features.

Because many buildings in the past have been unattractive, an article has been included on aesthetic values. And in "Designed for Living" a principal has outlined some of the building ideas that principals and teachers dream about. Finally, space has been given to sources of further aid to be found in the work of various agencies and in publications.

NEA RESEARCH DIVISION



Design Harmonized with Function

F. L. Schlagle and Lewis H. Brotherson

THE PARKER ELEMENTARY SCHOOL of Kansas City, Kansas, constructed in 1940, has been the subject of much favorable comment by school administrators, board of education members, and architects. Attention was directed to this modern elementary school structure when the American Institute of Architects designated it as the most outstanding public building erected during the year in eastern Kansas and western Missouri.

The school has a capacity of 430 students. In addition to ten classrooms and a kindergarten, it contains an office, clinic, library, gymnasium-auditorium, work project room, teachers' rest room, and toilet facilities. The building is simple and modern. Architectural beauty is obtained by careful balancing of building masses rather than through useless ornamentation. The plan began with an analysis of classroom needs for the Parker district, which is a growing neighborhood near the northwest edge of the city. School administrative officials encouraged supervisors and teachers to submit suggestions that might enhance the usefulness of the proposed building. The plan developed from a conception of successful classroom units transformed into building materials by the architect's specifications, with the predominant aim of emphasizing the functional requirements of the school.

Each classroom is equipped with 40 portable combination chair and desk units. Floors are of maple, finished with a penetrating seal. Walls and ceilings are of tinted sand-finished plaster. Built-in wardrobes are provided for the students, and individual wardrobes for the teachers. Each room has a built-in bookcase, a considerable area of slate chalkboard, with a cork tack strip, and a large bulletin board area.

Dr. Schlagle is superintendent and Mr. Brotherson is business manager of the Kansas City (Kansas) Public Schools; architect, Joseph W. Radotinsky, Kansas City, Kansas.

The kindergarten room has a floor covering of bright colored linoleum, and is equipped with tables and chairs. Individual juvenile toilets adjoin the room, and a separate alcove is provided for work on projects. An acoustical ceiling adds to the effectiveness of this room (bottom of this page).

A project or workroom for older students is provided on the second floor. This room, which is housed above the entrance, contains work benches, storage space, and a sink, and is useful in clay modeling, painting, carpentry, and other activities designed to improve manual dexterity. The impressive tower effect of the entrance is obtained as a result of the very practical purpose of this project room.

The community aspect of the modern elementary school is reflected in the combination gymnasium-auditorium, which can be used independently of the academic portion of the school. Architectural beauty and practical simplicity are the result of the use of brick as an interior finish in this all-purpose room. The wainscoting is a deep chocolate, smooth, iron-spot brick. A checkerboard pattern of fire clay brick constitutes the walls. This provides a finish more durable and less subject to maintenance expense than would plaster. The room is equipped with a stage with footlights. Under the stage is housing space on trucks for the storage of 350 folding chairs.

The auditorium may be entered from the school corridor or by a separate public lobby. A small kitchen off the lobby permits serving of Parent-Teacher Association luncheons or light refreshments for evening functions.

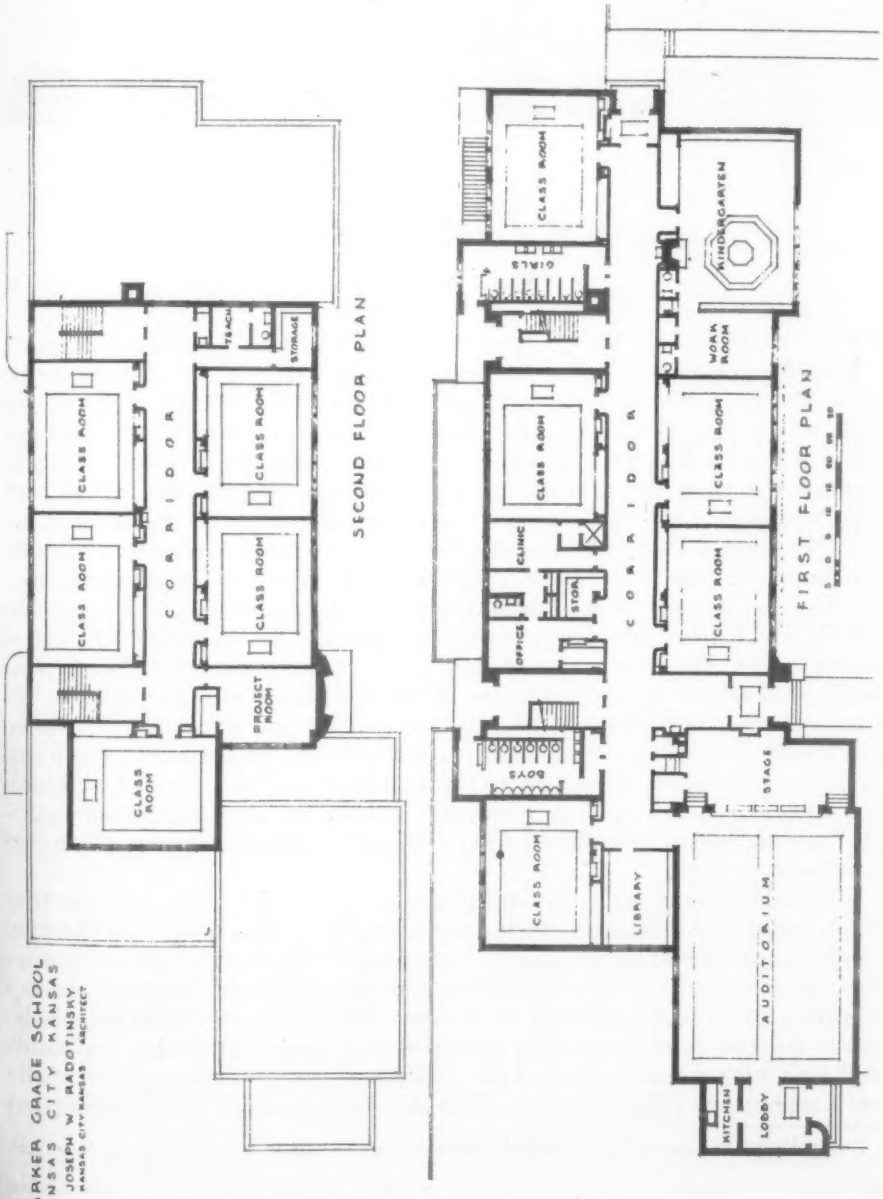
Corridors are ten feet in width, with asphalt tile flooring and acoustical plastered ceilings. Glazed tile wainscoting minimizes the need for frequent painting. Two stair wells, lighted through glass blocks, provide access to the second floor.

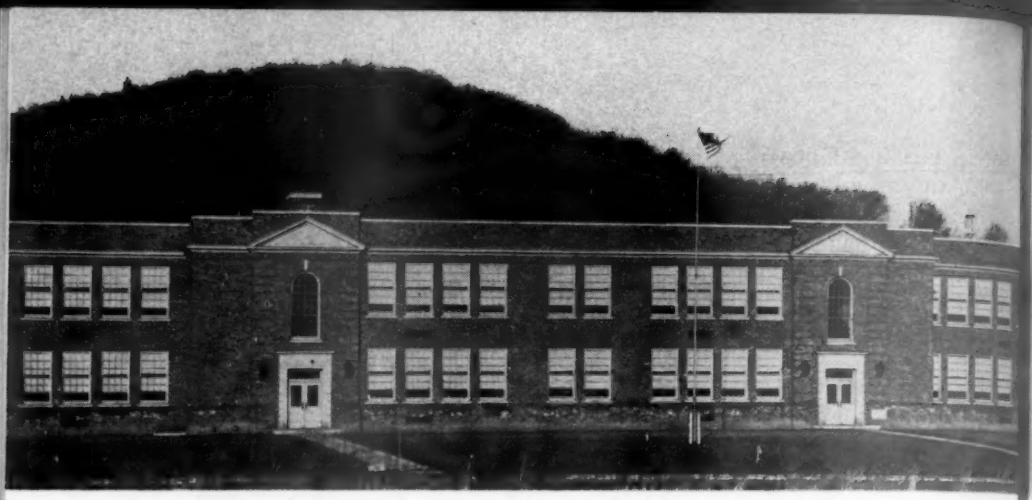
The toilet rooms may be entered from the playground as well as from the building. The toilets have concrete floors, and tile walls.

A basement heating plant consists of a firebox steam boiler, equipped with an automatic bituminous stoker. Unit ventilators and direct radiation, with automatic temperature control, complete the heating plant.

The site has an area of 3.6 acres. A large lawn area provides a setting for the front of the building. The play area is paved with asphalt.

The Parker School was constructed as a PWA project. Total cost of building and equipment was approximately $134,000.00.





In a Natural Setting

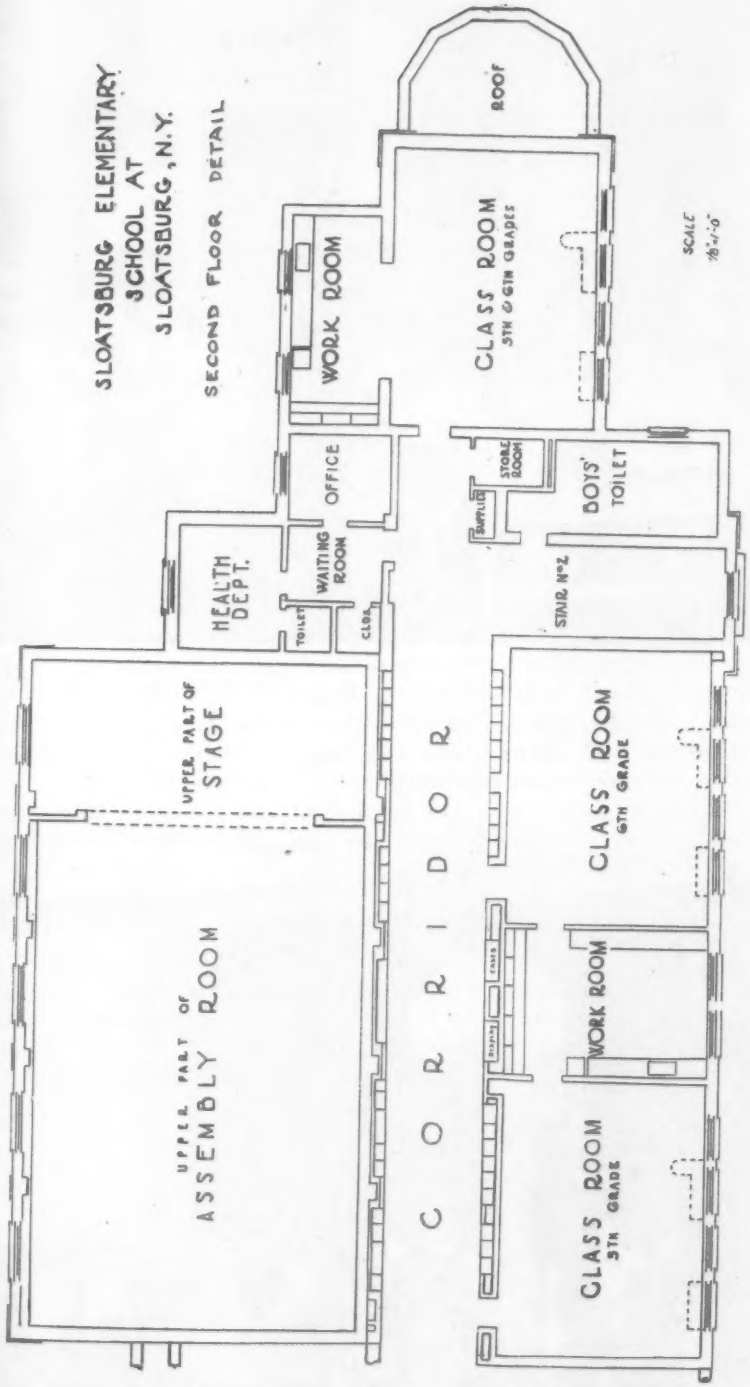
Foster S. Brown

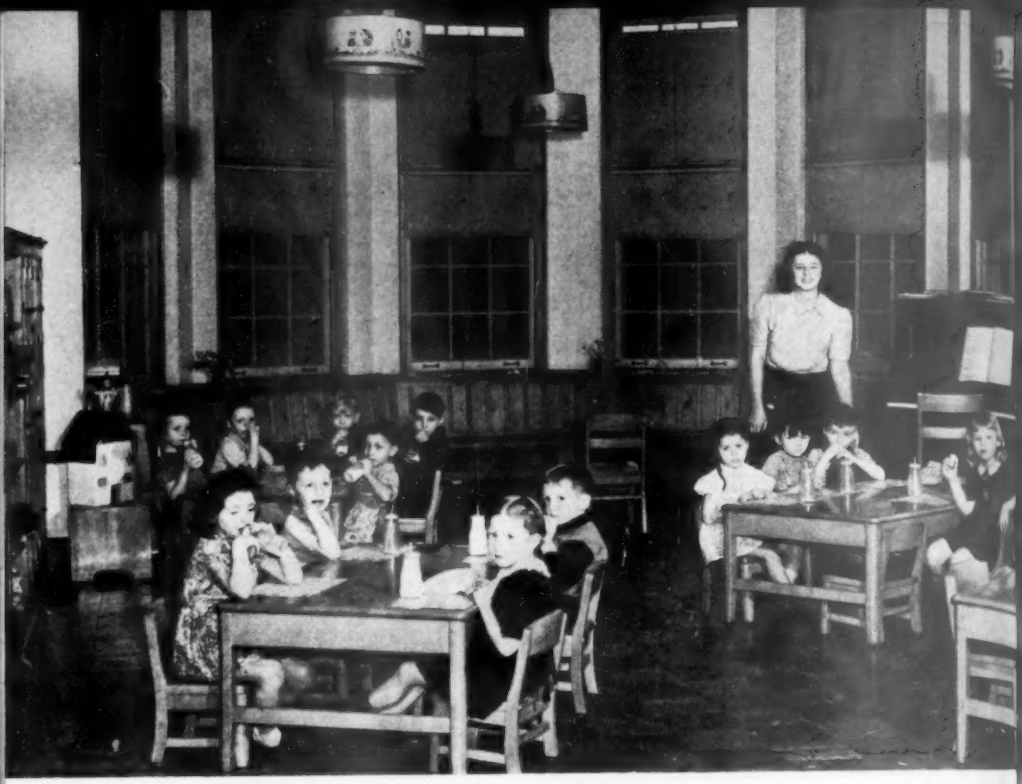
THE SLOATSBURG Elementary School is located on a broad elevation midway between the upper and lower sections of the village, yet far from the main highway. Its setting has the natural beauty of woods and hills which lend themselves to picnicking and exploratory field walks on school ground. A stream of water a half mile from the grounds affords an opportunity to study water life not too far distant from the site of the school. The school property is about ten acres; two of these have been developed for playground. Its location allows the school to have a minimum of traffic passing its doors and to have a maximum of safety, seclusion, and quiet.

The architecture of the building is simple but charming, with a purposeful dignity. Exclusive of trim, doors and windows, the building is of fireproof construction. The floor and roof slabs are reēnforced concrete. The exterior walls are entirely of brick, and the interior walls are of cinder blocks. The floor covering is of asphalt tile and all ceilings are of acoustical plaster. Each room has its own thermostatic control for oil heat. Under certain conditions the univents in each room bring in fresh air, but if the outside air is too cold, the inside air is recirculated. Telephones allow inter-communication within the entire building and each room is also equipped with an electric clock.

The classrooms are large and pleasant, with light walls and oak trim. Each room has a built-in bookcase, teacher's cloak closet, and the usual chalkboards and bulletin boards. Underneath the chalkboard sections are deep bins for storing large portfolios and papers. Each classroom shares a workroom with the adjoining classroom—the workroom being located between the two classrooms. It is equipped with long work tables, cupboards, and sink with running water. One classroom has a built-in workroom, the only separation being an arch. This alcove is a much more satisfactory

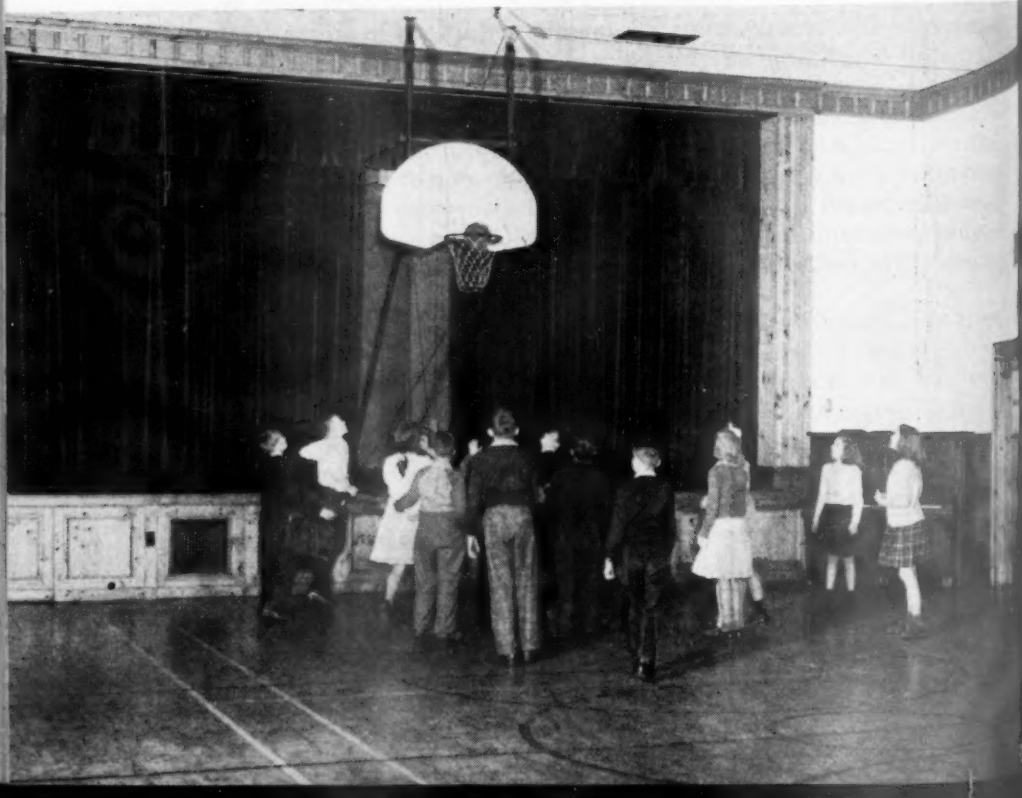
Mr. Brown is supervising principal, Central School District No. 1, Ramapo, New York.


SLOATSBURG ELEMENTARY
SCHOOL AT
SLOATSBURG, N.Y.
SECOND FLOOR DETAIL
SCALE
ROOF
CLASS ROOM
5TH & 6TH GRADES
WORK ROOM
OFFICE
STORAGE ROOM
SUPPLIES
BOYS' TOILET
HEALTH DEPT.
WAITING ROOM
TOILET
CLOS.
STAIR No. 2
UPPER PART OF STAGE
UPPER PART OF ASSEMBLY ROOM
C O R R I D O R
CLASS ROOM
6TH GRADE
WORK ROOM
CLASS ROOM
5TH GRADE



The kindergarten is ideal

Gymnasium and auditorium combined



arrangement and more usable, for it is more accessible, is open to view, and is more easily supervised. The classroom doors in the shared type of workroom open into the room and can be fastened open only by means of a rod which slips into a groove in the floor.

The kindergarten is ideal. It is large, airy, and has the sunlight from the east, south, and west. One end of the room is circular, with long windows and comfortable window-seats. One wall is lined with knotty pine cupboards for the use of children and teacher, broken by an imitation fireplace and mantel. Opening from the classroom is a hall with its lavatories and store room. The kindergarten has its own entrance and exit so the children may go to their section of the playground away from the movement of older pupils. The doors to the kindergarten room are specially constructed so that the heat will not escape and allow the floors to be cool.

The principal's office and nurse's quarters on the second floor are a unit opening from a common waiting room. Their location on the first floor would be more advantageous.

The gymnasium and auditorium are the same room—an arrangement which works well in an elementary school building. However, the room was originally planned for a triple purpose—its third to be the school dining room. This arrangement, as far as its location to the kitchen is concerned, is splendid, for the kitchen adjoins it. The plan was to have tables and chairs set up daily and taken down following lunch. This would necessitate much labor and is not practical. When all classrooms were in use, the children ate from trays which they carried to their classrooms on the first and second floor. Later an empty classroom across the hall from the kitchen was fitted with tables and cupboards and used as a dining room. This leaves the large assembly room to be used as a gymnasium and auditorium.

The Sloatsburg Elementary School, which was completed in 1942, has a capacity of 300 pupils and serves well the children and adults of the community. It was the work center for the local Red Cross during the war, and is the play center for the youth and adults. It is a school of which each citizen is proud.

The school building is on the edge of a six-acre lot with three acres newly graded and developed. The outdoor play area with its soft-ball diamond and playground equipment serves admirably as a community recreation center. A summer recreation program operates seven weeks with school sponsored personnel supervising the activities.

Education Award

The American Education Award for 1946 has been presented to Sherwood D. Shankland, Executive Secretary, American Association of School Administrators. The Award is given each year, by the Associated Exhibitors of the National Education Association, to a person who has made an outstanding contribution to the broad field of education.

A Homelike Atmosphere

Millard D. Bell

THE J. ROBB HARPER Elementary School of Wilmette, Illinois, is one of the latest of the prewar school buildings. It is indicative of the changes that were starting in school building construction as the result of changes in educational philosophy. In the Harper building the visitor will find many unique deviations from the traditional school, but also a very practical and workable plant that has low maintenance and operation overhead. It has a homelike atmosphere and avoids all institutional aspects. Many new materials were utilized, such as cinder brick, glass brick, linoleum wainscot, asphalt flooring, and acoustical board for ceilings.

The moment one steps inside the smoke-blue, peach, and rose-beige octagonal foyer, he is captivated by the spell of soft warm color. Down the low-ceilinged corridors he goes to one of the large classrooms where informally arranged chairs and tables of blond birch are seen against a striking window arrangement. One great landscape window is flanked by smaller windows to give an interesting and homelike variation. In the lower grades window seats are put to frequent use.

The six classrooms have acoustical ceilings, forced ventilation and Venetian blinds. Kindergarten and primary rooms are provided with separate toilets and connecting workrooms for class projects. These pupils have their own cloakrooms, the upper grades use lockers in the corridors.

Harper isn't a school that closes at 3:30 p. m., when the children skip out the great front doors. Likely enough on the way out they meet an older brother or sister or some of the neighbors, for the plant is designed for day-long and evening-long occupancy. The more the public uses this beautiful building for other educational, civic, and cultural meetings the better the board likes it, as continuous use indicates a large return for the tax dollar.

Mr. Bell is superintendent of schools in Wilmette, Illinois.

The plan shows how simple it is for the public to find the office and executive suite and the community rooms. Directly opposite the main entrance is a combined community room and library, furnished with attractive groupings of easy chairs and cushioned settees, in addition to the standard library tables and seats.

Adjoining the library is the auditorium, which seats 150. It is suitable for gatherings of civic organizations and for school theater projects. The pupils and the public will be able to go into real professional enterprises as there is complete stage equipment. A unique figured curtain of Gibraltar cloth, in place of the usual velours, should be mentioned, as well as the large workroom where stage scenery can be built.

To the left of the community room a wide double door opens from the main lobby into the gymnasium, which is used for neighborhood parties and gatherings. It is equipped with a kitchen for serving complete hot lunches for the children and banquets for the adults. Small locker, toilet, and shower rooms for boys and girls serve at night as coat rooms for use by the public.

A trip to the basement will not consume much time for it houses only the heating plant, mechanical controls, a general storage room, and the janitor's quarters. The heating plant consists of a low-pressure boiler, stoker, and coal bin. All mechanical controls for ventilation, lights, and power are adjacent to the boiler room. Each unit is compact, labeled, and readily accessible to the custodian or the repairman.

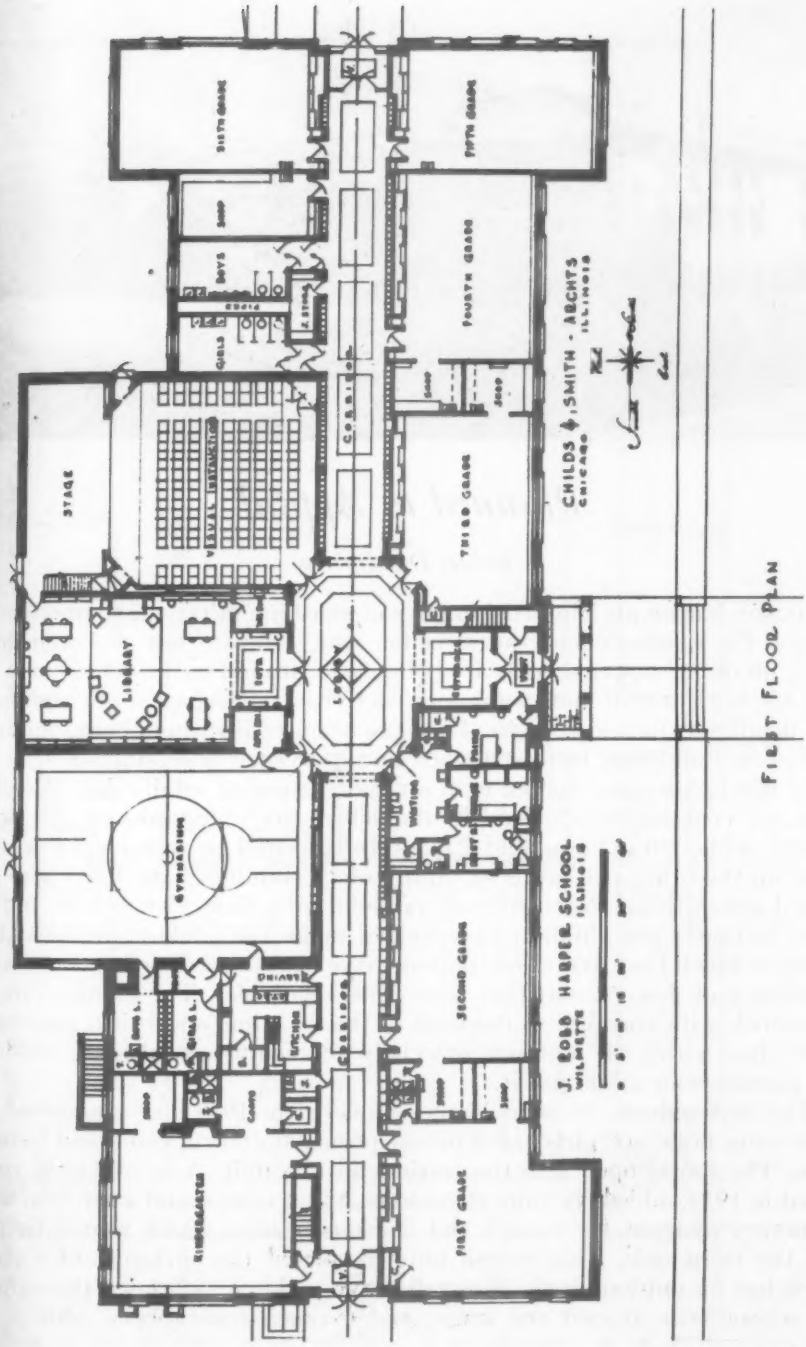
The five-acre campus is located two miles from the center of Wilmette in a highly residential, newly built district of one- and two-story dwellings. The architectural style of the school was made to conform in scale and character. The exterior is a soft Williamsburg brick with a minimum of stone trim. An expansible roof makes it possible for the school to be doubled in size.

At the back of the building is a black top surfaced play area for all winter use. Two playfields for small children are well equipped. When plans are completed, the school grounds will have in addition to the two grassed playfields and the all-weather surfaced area, an outdoor fireplace and council ring, archery range, and a kindergarten open-air classroom.

The features of the Harper School building that impress most visitors are: the skillful use of lots of color; the large landscape windows; the unusual arrangement around a center or focal point, the octagonal foyer; the attached workrooms; and the easy ingress and egress of the playgrounds.

Landscape window in classroom

Combined community room and library


J. ROBB HARPER SCHOOL
WILMETTE ILLINOIS
CHILDS & SMITH - ARCHTS
CHICAGO ILLINOIS
FIRST FLOOR PLAN
STAGE
LIBRARY
GYMNASIUM
CORRIDOR
LOBBY
OFFICE
BOYS
GIRLS
SIXTH GRADE
FIFTH GRADE
FOURTH GRADE
THIRD GRADE
SECOND GRADE
FIRST GRADE
KINDERGARTEN

Planned to Appeal

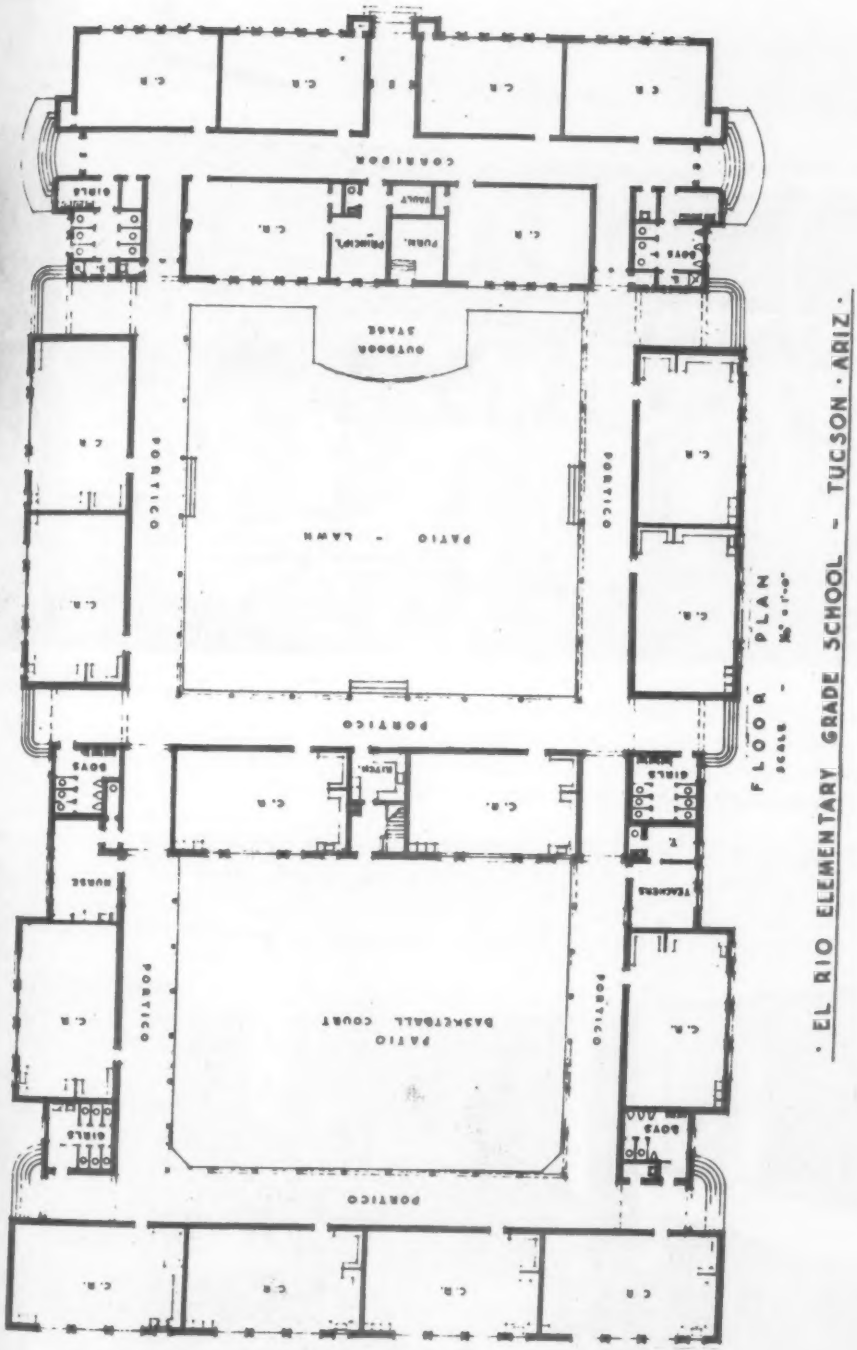
Robert D. Morrow

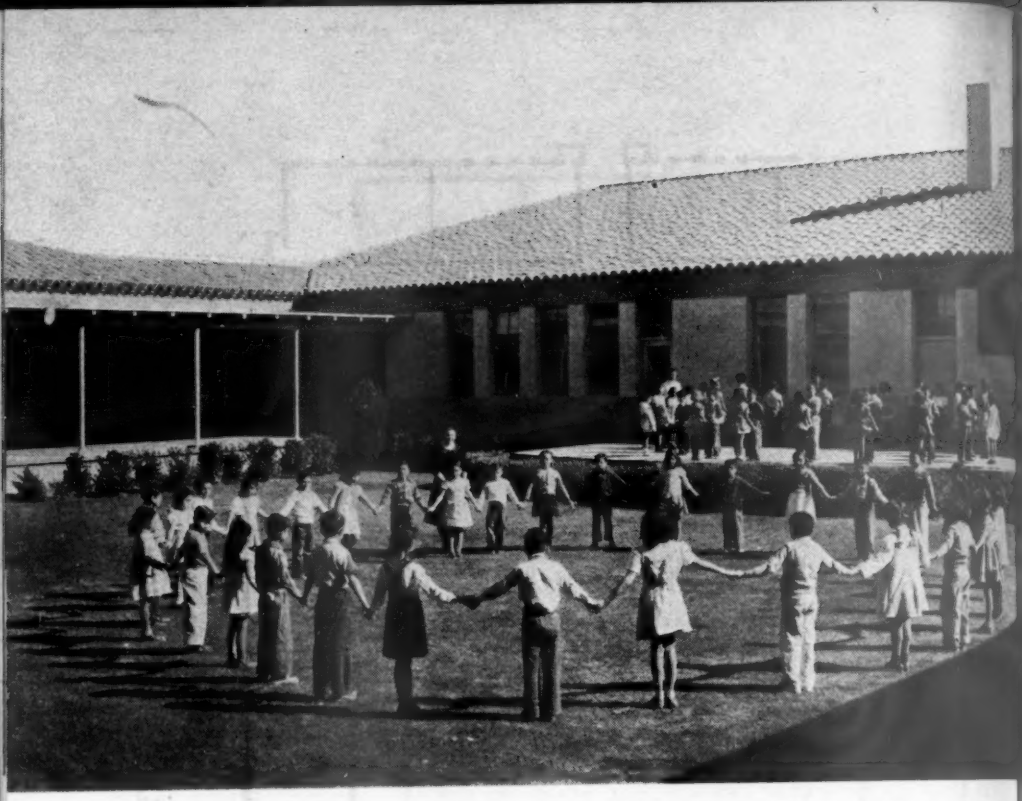
TUCSON has an anticipated 336 days of sunshine in the year. In order to use the outdoors and the sunshine which nature has so bountifully given, all of our newer schools are being built around patios which may be used for both school and community activities. The patios are equipped with floodlights for use at night. They can be entered without going through the building and may be closed when no supervision is possible.

El Rio Elementary School is in a rapidly growing subdivision. Ninety-eight per cent of the children in the school are of Spanish or Mexican descent, while a few Yaqui and Papago Indians and an occasional towhead make up the other two per cent. Many of the families have lived here for several generations. Practically all of them own their own homes and in many instances the children have helped make the adobes and build the homes in which they live. Their parents have beautified their homes with an abundance of flowers, and they also grow vegetables. The architecture of the school, with concrete to the level of the floor line and brick, plastered, above that, with a tile roof, was especially planned to appeal to the children and parents who would use it.

The first unit of the school was completed in 1939 and consists of six classrooms, boys' and girls' toilet rooms, principal's office, vault, and furnace room. The rooms open into the corridor in this unit. A second unit, completed in 1942, added six more classrooms, toilet rooms, and a kitchen, with temporary quarters for nurse's and teachers' rooms, which were later put into the third unit. This second unit completed the enclosure of a patio which has an outdoor stage. Australian rye makes a rich lawn throughout the school year around the stage, and evergreen shrubbery adds to its

Mr. Morrow is superintendent of schools in Tucson, Arizona.


CORRIDOR
OUTDOOR STAGE
PORTICO
PATIO - LAWN
PATIO
BASKETBALL COURT
FLOOR PLAN
· EL RIO ELEMENTARY GRADE SCHOOL - TUCSON · ARIZ ·



Playtime in the patio

A classroom; note alcove at rear

attractiveness. The classrooms open onto a covered portico surrounding three sides of the patio. The third unit was completed in 1945. It encloses a patio which is surfaced for basket ball and volley ball courts. Six classrooms, nurse's and teachers' rooms, and boys' and girls' toilet rooms make up the third unit. They open onto the covered porticoes on three sides of the patio.

All the classrooms contain storage space, while those in the second and third units have been made longer to accommodate an alcove for lockers and a project area, with sink, work surfaces under which are storage spaces, and work table. A large bulletin board is placed above the work surfaces. Thus these newer rooms are better adapted to an activity program than the older ones. They are built to accommodate thirty-three pupils each.

Classroom floors are of linoleum and the walls are of plaster, painted. In the third unit, tiles on either side of the doors make it easy to keep the walls free from children's fingermarks, for they can be washed off with a damp cloth. All ceilings, except in the toilets, are of acoustical plaster or acoustical tile. The woodwork is of pine, painted. In some rooms the ceilings and chalkboards have been slanted in an experiment to reduce glare and provide a better distribution of light. The chalkboards of the newer rooms occupy less space than in the first unit, and more space is given to bulletin boards. Above the chalkboards are map rails and tackboard space for the easy use of visual aids. Some of the rooms are furnished informally with large tables and chairs, while others have adjustable individual chair and desk units. All furniture is movable to allow for easy grouping of small groups which are working together.

In corridors and special rooms the floors are surfaced with linoleum, while in the toilets the floors are of tile and in the porticoes of cement. The toilets have a tile wainscot. All windows are of steel sash with double strength glass. They are hung with Venetian blinds. All electric work is in conduit with standard fixtures. Plumbing fixtures are of the best grade, with cast iron soil and copper water pipes throughout. The heating system is two-pipe steam with copper convectors and gas-fired steam boiler. The building, exclusive of porticoes, has an area of 22,500 square feet, and the porticoes have an area of 6,500 square feet. The total cost amounted to $150,400.00.

El Rio School is a center for community activities and many worthwhile projects, such as health, nutrition, first aid, and home nursing classes, dental clinics, bond drives, and classes in citizenship originate there. Boy Scouts, Girl Scouts, Girl Reserves, and adult groups make use of the recreational facilities. The parents have helped to landscape the school grounds and are helping in many ways to make El Rio School one of the most attractive schools in this area.

Acknowledgements for commercial photographs: p. 8, 10, Banrock Studio, Pearl River, N.Y.; p. 12, 13, 14, Hedrich-Blessing Studio, Chicago; p. 24, Charles Rice.

With a Community Emphasis

M. L. Knapp

In 1941 the school city of Michigan City, Indiana, completed the first two of a series of five elementary schools which were projected in a building program. Both of these buildings were planned to accommodate a maximum enrollment of 250 pupils in the seven classrooms.

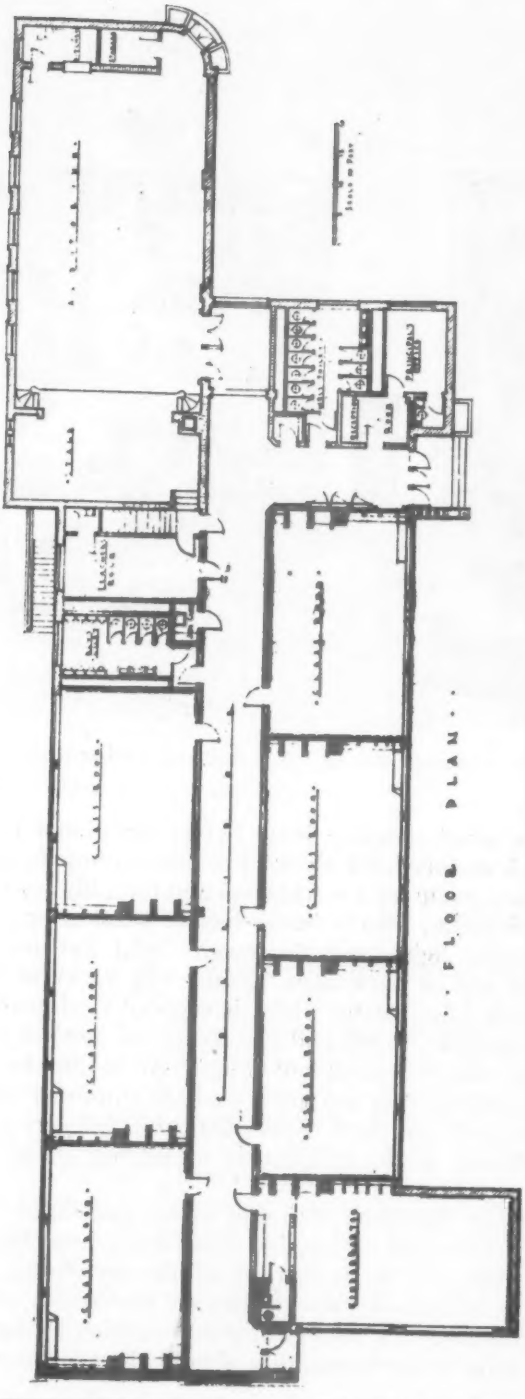
While some alterations had to be made in the original plans because of limiting factors in the Indiana law governing the financing of school buildings, there was strict retention of the functional aspects of the buildings in terms of a modern educational program.

The school district was fortunate to have the services—and this is very important—of Phelps and Peck, an experienced competent firm in architectural planning, engineering, and constructional supervision.

The buildings are similar in plan and construction so that the description of the Marsh Elementary School, illustrated in these pages, will make clear the character of both.

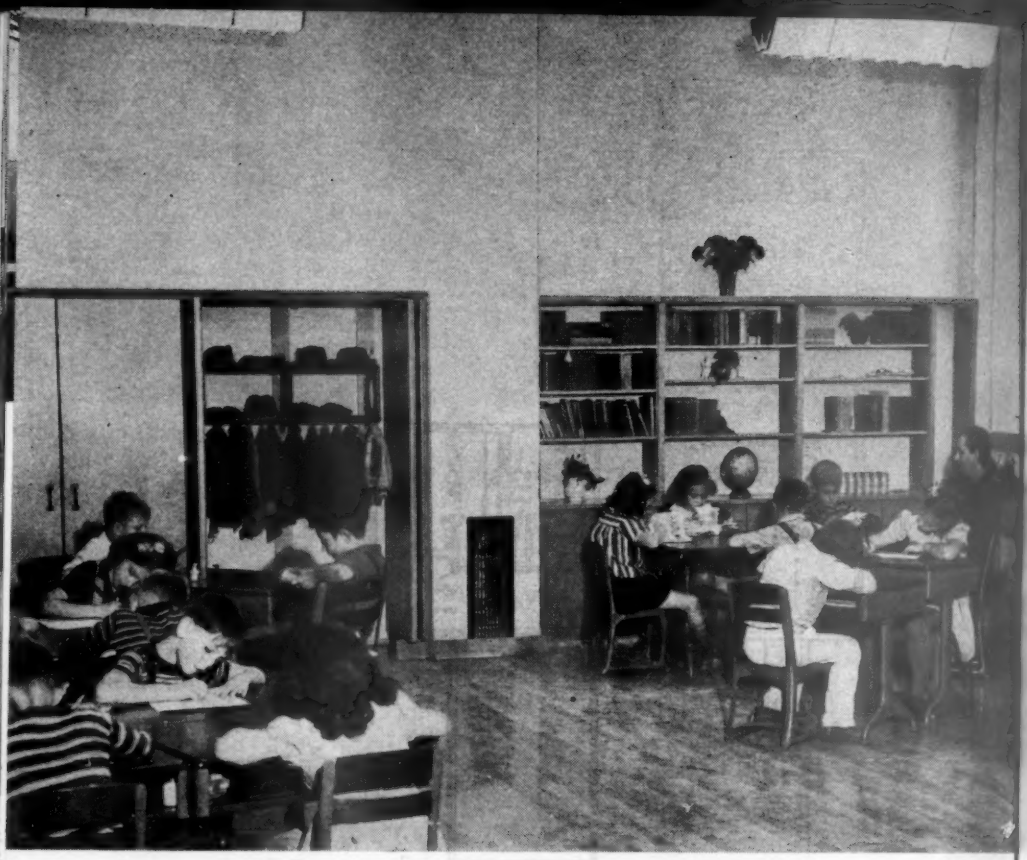
The schools are one-story buildings, constructed of brick and reënforced concrete, and are planned for use by kindergarten groups and the first six grades. The buildings include auditorium-gymnasiums measuring 53 by 30 feet, with stages 18 by 30 feet. The location of these rooms permits of both school and community use of the areas. They are so arranged that they may be shut off from the school proper and used by community groups day or night without disturbing the school program. The auditorium lights are recessed and the stages are lighted by spotlights mounted on the ceiling of the auditorium and the stage, making footlights unnecessary. The stages are equipped with velours front drop and full rep cyclorama on tracks. At the rear of each auditorium are a kitchen and a storage room. The kitchens are equipped with sinks, storage cabinets, and electric hot plates for use of the Parent-Teacher Association and other groups. Each auditorium seats 250 people. In practice each auditorium-gymnasium serves for the physical education activities, for assemblies, and for class projects involving the use of the stage.

Mr. Knapp is superintendent of schools in Michigan City, Indiana.



MARSH ELEMENTARY SCHOOL
MICHIGAN CITY — INDIANA.
PHELPS AND PECK — DESIGNING & CONSTRUCTION ENGINEERS

FLOOR PLAN



Library and reading period, 1A-2B

The classrooms, which measure 36 by 22 feet, are planned for a modified activity program. A shallow book alcove, providing ample bookshelving and project storage space, room for a workbench and for a library table, is found at the rear of each room. Thirty linear feet of window space provide an abundance of natural light, and fluorescent light fixtures supply ideal conditions at night and on dark days. Rooms with south or west exposure are finished in a pale blue plaster which is especially adapted to break up and absorb direct sunlight. North and east rooms are finished in buff plaster, which is warm and reflects a maximum of light. All ceilings are a buff white. Chalkboards are a sightsaving leaf green and are equipped with removable grilled channels to catch and hold chalk dust. Map rails are installed on all boards. For displaying work, corkboards measuring 20 by 3½ feet are provided.

The classrooms are furnished with unit tables and chairs for grades one to three, and with universal adjustable desks for grades four to six. The average class enrollment is 30, so there is ample opportunity to adjust the furniture informally for activity work. The easy movability of the furniture also provides opportunity for segregating the working groups on different levels, thus facilitating fuller recognition of individual differences. Entrance

nto one of these rooms during working hours gives the impression of a well-organized workshop rather than a conventional classroom.

The kindergarten, which is equipped with plentiful storage space, a wardrobe, a lavatory, and a drinking fountain, is finished informally and colorfully. The linoleum-covered floor is marked for games and activities and has animal figures inlaid. Like other classrooms, the kindergarten is fitted with Venetian blinds for the complete control of the natural light.

A teachers' room, fitted with a lavatory and toilet, is of sufficient size to serve the school doctor for the physical examination of pupils. The principal's office includes a waiting room and a small washroom, in addition to the office proper. Girls' and boys' toilets are located where they come under the easy supervision of the staff. Near the main entrance glass-enclosed display cases have been provided.

The foundations are made with reënforced concrete; the exterior walls are faced with rough-texture, fire-clay brick, and limestone trim with hollow tile backing. The roof load is carried on solid brick columns and concrete beams. The walls above the windows are carried on steel I beams by steel lally columns, set in small brick piers.

The floors are carried on steel bar joists; maple floors in classrooms; terrazzo floors in corridors and toilet rooms; finished floor in the auditorium, and principal's office of maple. The doors and windows are: exterior doors, steel; interior doors, birch veneer; all door frames, metal; window sash, steel.

The plumbing consists of suspended lavatories and toilets and drinking fountains, and seat-operated water closets of standard and junior size. All pipes are in pipe tunnels and utility chambers.

The heating is vacuum steam with oil-fired boilers, unit ventilators, and direct radiation, thermostat-controlled.

Summer Conference in Indiana

All elementary principals, teachers, supervisors and superintendents are invited to attend the Third Annual Summer Conference of the Indiana Association of Elementary School Principals at Butler University, June 24-28, 1946. Study groups, lectures and discussions will be under the direction of such well-known leaders as Dr. Frank H. Gorman, Dr. Willard C. Olsen, Dr. Herbert F. Spitzer, Dr. F. C. Hokema, Superintendent H. H. Church, Miss Ruth Bristol, and Miss Eleanor O'Connor. The general theme of the conference will be "Practicing Our Educational Philosophy."

If you are interested in attending this conference, make application before June 1 to College of Education, Butler University, Indianapolis 7, Indiana. Register for Education 498M; the fees are: undergraduate credit, $12.50; graduate credit, $13.00; non-credit, $10.00. Dr. F. H. Gorman, Professor and Head of the Department of Elementary Education, is the Director of the Conference.

The Result of Much Planning

W. W. Haggard

THE CAMPUS ELEMENTARY SCHOOL of the Western Washington College of Education at Bellingham provides facilities for the supervised experiences with children necessary in training modern elementary teachers. This building, erected from funds appropriated by the legislatures of 1939 and 1941, was used for the first time during the summer quarter of 1942. The cost of construction was $335,696.40, and of equipment, $12,228.00.

The style of architecture is modified Romanesque, which harmonizes with that of most of the other college buildings and the landscape. The construction is reënforced concrete and brick, trimmed with cast stone; the roof is tile. It is thoroughly fire resistant and water-seepage proof.

The heating and ventilating systems are modern in every respect, and the lighting, in the interest of uniformity and conservation of eyesight, is controlled by the photo-electric cell. Also, a maximum of natural light is provided by spacious windows. All floors are covered with linoleum with the exception of the playrooms, which have grain fir block floors, and the ramps (no stairs in building), which are covered with rubberized material. The ceilings of all rooms and corridors are acoustically treated.

The director's office, the health unit, the auditorium, three playrooms, two city supervisors' offices, and the suites for the kindergarten and the first and second grades are located on the first floor. The dining room and kitchen, the science and art workroom, the music room, the faculty room, and the suites for the third, fourth, fifth, and sixth grades are on the second floor.

The library is retained in the main library building, which is near by. The health unit, across the corridor from the director's office, meets all

Dr. Haggard is president of Western College of Education at Bellingham, Washington.

the requirements of such a unit in a modern health program. The auditorium contains 192 stationary seats, space in the front for chairs of smaller children, and a modern stage with wide low steps leading to it from the main floor. The dining room and kitchen, in addition to serving the usual purpose, meet certain teaching and social needs of the school. The science and art workroom provides a laboratory for science, and art and crafts activities.

The classroom arrangement of the building is worthy of full description. Four elements comprise each class unit: a classroom proper for the usual instruction purposes; a separate workroom for craft work and other noise producing activities; an office for consultation and work with small groups, and a supply room. Class and workrooms are usually large to accommodate both children and observers and to allow student teachers to work simultaneously with small groups of children without crowding.

Special built-in cabinets proportioned to the heights of their users are provided in all rooms of the class unit for storage of materials, tools, and children's work. Each workroom has a deep sink with hot and cold water. Quiet alcoves in classrooms facilitate individual reading or a story hour. Each class unit is consciously different from other units in its shape and arrangement, as well as color of walls, woodwork, and floor. Each has its own individuality, with a definite feeling of informality and friendliness pervading the whole.

This building is the result of much planning in which trustees, administrators, faculty, student teachers, children, and the architect participated democratically. All efforts in designing and constructing the building were focused on carrying out the philosophy of education that the child should go to school amidst surroundings conducive to desirable growth and that every modern facility for student teaching should be provided.

Structure: Foundations and structural framework, reënforced concrete. Exterior walls veneered with faced brick and furred with metal lath on steel channels. Steel trusses support roofs over playrooms.

Roofs: Main roof, timber framing supported on concrete attic floor construction, which isolates attic space from fireproof occupied portions of the building. Gymnasium roof, wood sheathing over steel purlins. Roofing, burned clay tile.

Windows: Vertical sliding wood windows hung on sash balances.

Floors: Playrooms, wood block. Classrooms and corridors, linoleum. Toilet rooms, ceramic tile. Ramps, resilient sheet rubber.

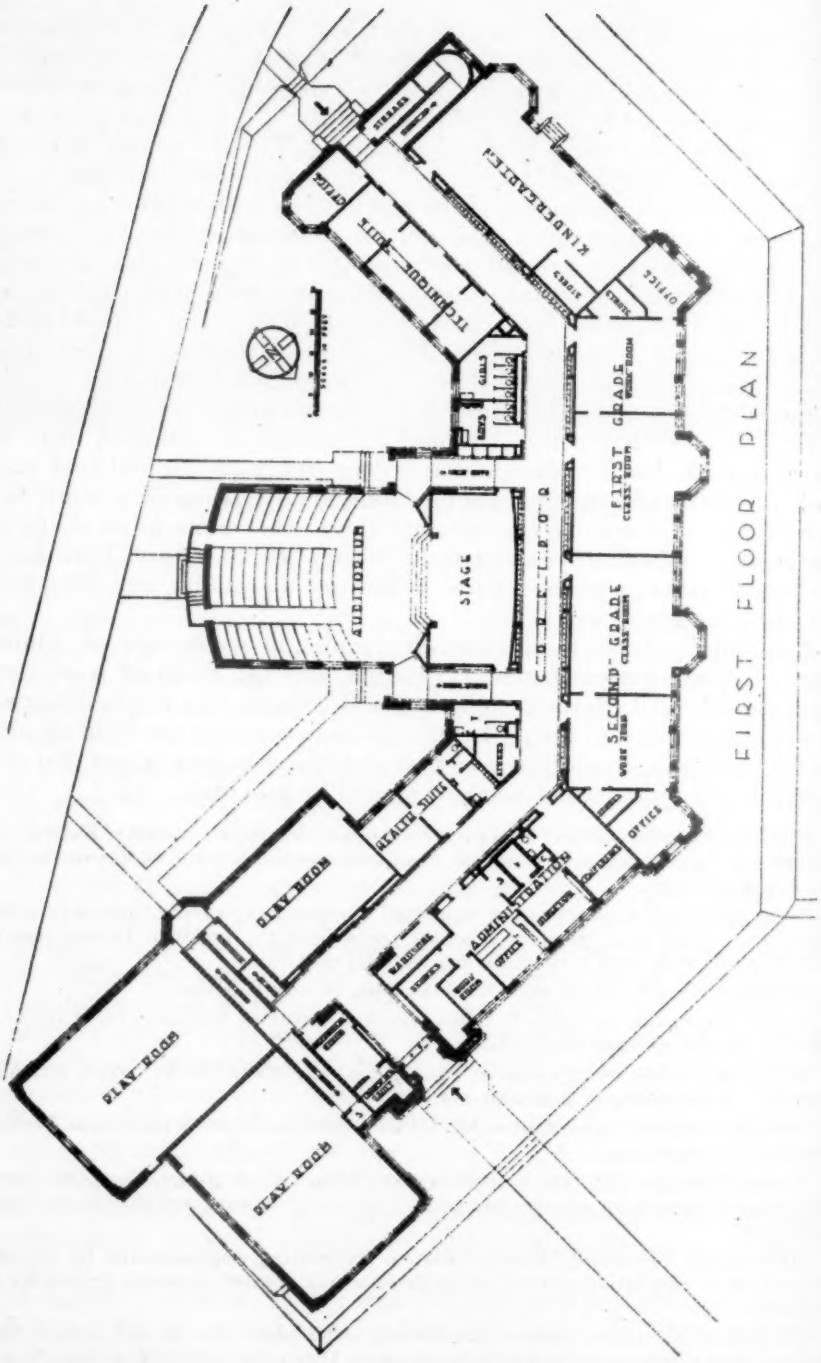
Walls: Playrooms, wood wainscot, painted masonry above. Toilet rooms, ceramic tile wainscot. Cafeteria, knotty pine wainscot.

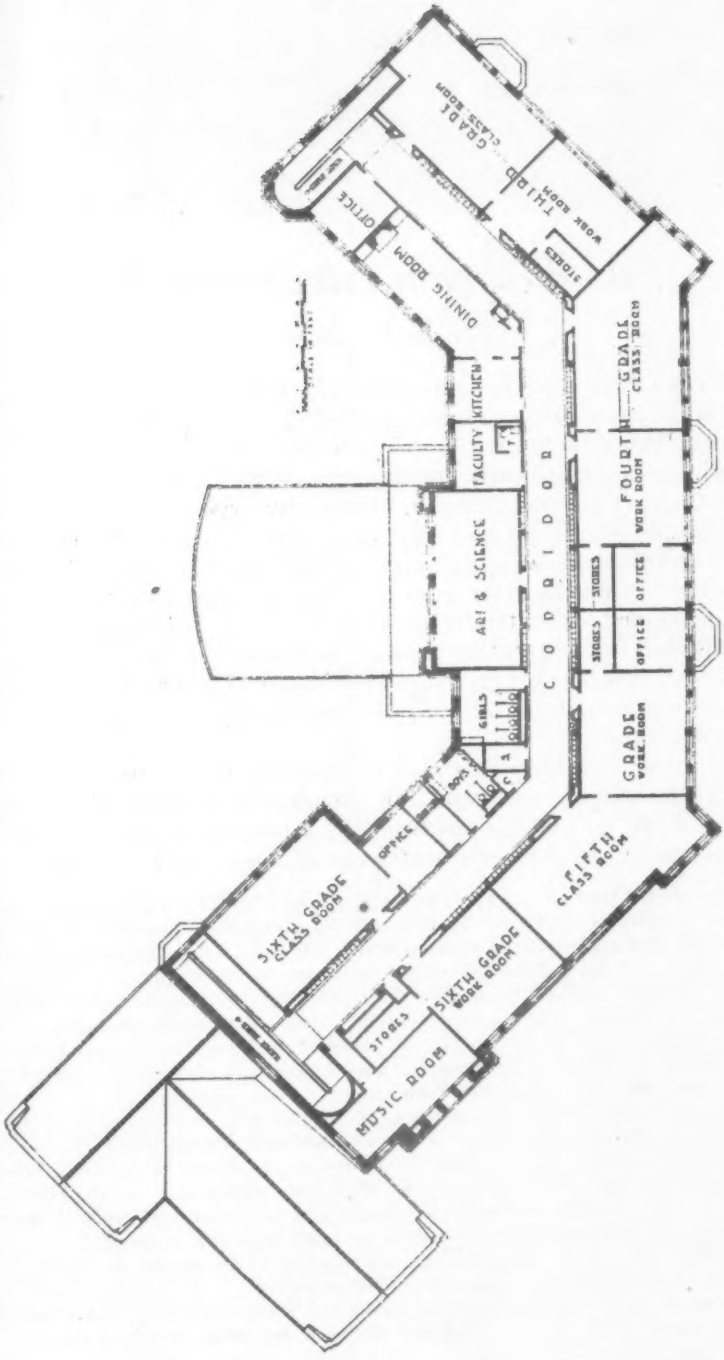
Ceilings: Acoustical plaster in corridors. Plain acoustical board in playrooms. Perforated acoustical tile elsewhere.

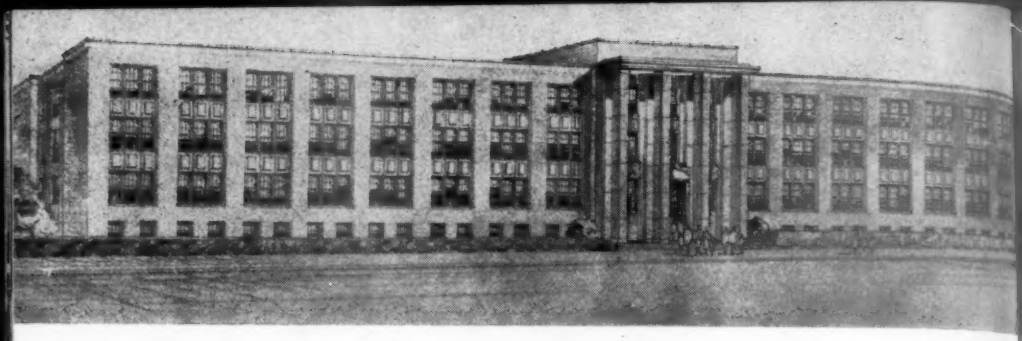
Storage Facilities: Cabinets in corridors for children of all grades. Each class suite includes large storeroom for supplies and ample cupboards, drawers, and shelving in class and workrooms.

Heating and Ventilating: Direct radiation for heating, supplemented by completely air-conditioned ventilating system, under thermostatic control. Separate system for auditorium.

Lighting: Class suites, indirect luminaries, under photo-electric cell control. Special illumination of display cases and walls in corridors. Direct lighting units recessed flush with ceiling in auditorium.


FIRST FLOOR PLAN
KINDERGARTEN
OFFICE
TEACHERS' TOILET
GIRLS
BOYS
FIRST GRADE
CLASS ROOM
SECOND GRADE
CLASS ROOM
WORK ROOM
OFFICE
AUDITORIUM
STAGE
CORRIDOR
HEATER ROOM
PLAY ROOM
ADMINISTRATION
OFFICE
DIRECTOR
PLAY ROOM
PLAY ROOM


SECOND FLOOR PLAN
CORRIDOR
ART & SCIENCE
FACULTY
KITCHEN
DINING ROOM
OFFICE
GRADE 8B CLASS ROOM
THIRD WORK ROOM
STORES
FOURTH GRADE CLASS ROOM
FOURTH WORK ROOM
STORES
STORES
OFFICE
GRADE WORK ROOM
GIRLS
BOYS
OFFICE
SIXTH GRADE CLASS ROOM
FIFTH CLASS ROOM
SIXTH GRADE WORK ROOM
STORES
MUSIC ROOM



For Maximum Educational Use

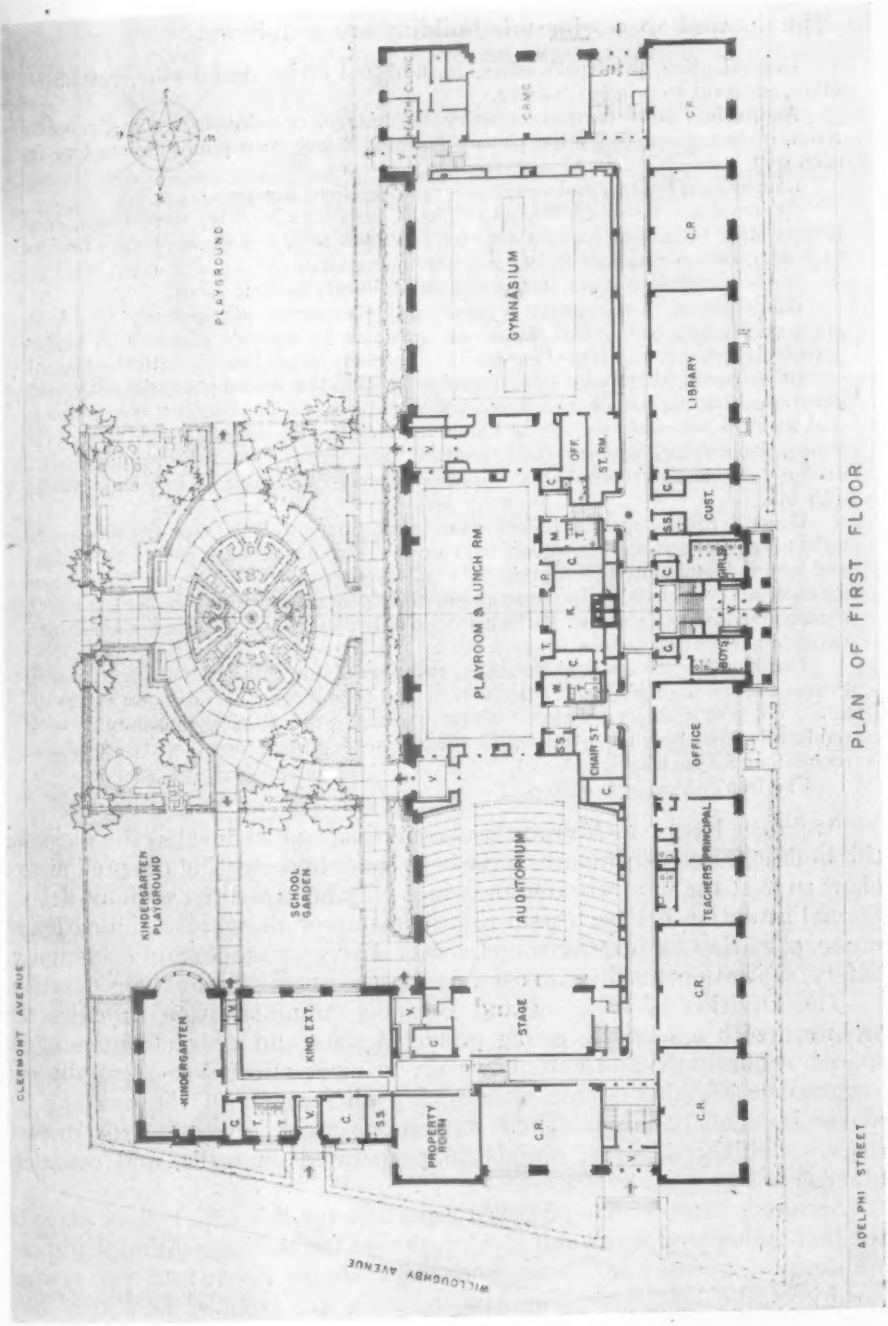
N. L. Engelhardt

NEW YORK CITY may be considered as a group of communities. In fact, in its history of geographic expansion it annexed community after community. Many of these lost their identities in the integrating process, but substitutes are constantly emerging. In many respects these communities have their own characteristics, marked by types of housing, economic status of people, traditions and emphases upon educational needs. Because of these conditions, new elementary school buildings are being planned with reference to needs as far as is possible. In other words, every schoolhouse is developed separately from its own statement of educational need, through all stages of adaptation to site, location of spaces, and architectural designing. In New York City, standardization of plans does not prevail. It is recognized as undesirable from the standpoint of city planning as well as of educational progress.

Public School No. 12 in Brooklyn is one of the many elementary schools included in the postwar program. The program of requirements proposes a capacity of 1,500 to 1,600 pupils from the kindergarten through the sixth grade. Excerpts from the basic statement of needs read as follows:

> It is expected that facilities will be made available to the community for recreation, civil and social activities. To this end the architect is expected to give due consideration in the planning and design of the following facilities: gymnasium, auditorium, library, visual instruction room, lunchroom, kitchen, teachers' lunchroom.
>
> In planning this school, the general desire is to have as many features contributing to the educational program as possible. Corridors shall be planned to make the greatest possible contribution to the educational program. Lunchroom and auditorium should be designed to make for varied use. Any multiple use that seems feasible should be tried out in the planning.
>
> In general, the architecture of this building should be adapted to or be an improvement upon the architecture of the neighborhood. The planning should result in a maximum use of space for educational purposes. It should be recognized that a beautifully designed school building may contribute significantly to the education of children. An attractive school building adapted to educational needs is desired, with initial costs and subsequent maintenance costs kept at a minimum.
>
> Probably no part of this building need exceed three stories in height. It is desirable to keep educational spaces out of the basement.
>
> The proposed plans shall make provision for future extension of the building with due consideration given to the most economic use of the proposed site.

Dr. Engelhardt is associate superintendent of schools in New York City.


PLAYGROUND
GYMNASIUM
PLAYROOM & LUNCH RM.
LIBRARY
OFFICE
AUDITORIUM
STAGE
KINDERGARTEN PLAYGROUND
SCHOOL GARDEN
KINDERGARTEN
KIND. EXT.
PROPERTY ROOM
CLERMONT AVENUE
WILLOUGHBY AVENUE
ADELPHI STREET
PLAN OF FIRST FLOOR

The detailed spaces for this building are as follows:

General office, principal's office, medical and future dental suite, custodian's office, assistant to principal's office.

Auditorium body (seating capacity 400), stage, two dressing rooms, property room, orchestra space, motion picture machine alcove, two public toilets (one for each sex).

Lunchroom, kitchen and service counter, teachers' lunchroom.

Gymnasium—K-6B (3,900 square feet), instructor's office, store room, community store room, two locker rooms (one for each sex), two shower rooms (one for each sex), two gymnasium toilets (one for each sex).

Nature study and visual instruction room, library reading room.

Kindergarten, kindergarten extension, kindergarten playground; 39 1A–6B grade classrooms, one special classroom; provision for exterior playground, kindergarten playground, and school garden is to be made in accordance with the manual.

Boiler room, fuel storage (it is desirable to equip this school primarily with an oil burner heating plant; however, provision shall be made for economic conversion to coal with the necessary storage and handling facilities in case of an emergency), fan rooms, incinerator, meter room, furniture store room, janitor's supplies room, garden tool storage, custodian's workshop, helper's locker, janitor's sink closets, dust bin.

General toilets, special toilets, two kindergarten toilets, two dressing room toilets (one for each sex), two custodial employees' toilets (one for each sex), medical and future dental suite toilet, principal's toilet, two exterior playground toilets (one for each sex), teachers' toilets, two public toilets for auditorium (one for each sex), gymnasium instructor's toilet (to be provided only if other facilities are not available), two gymnasium toilets (one for each sex).

Drinking facilities, shower facilities, two gymnasium showers (one for each sex), gymnasium instructor's shower (to be provided only if other facilities are not available), engineer's shower, locker facilities, pupils' wardrobes, gymnasium lockers, public telephone booth, general supply room, eraser cleaning room, two teachers' rest rooms (one for each sex).

Children's Organization Room.

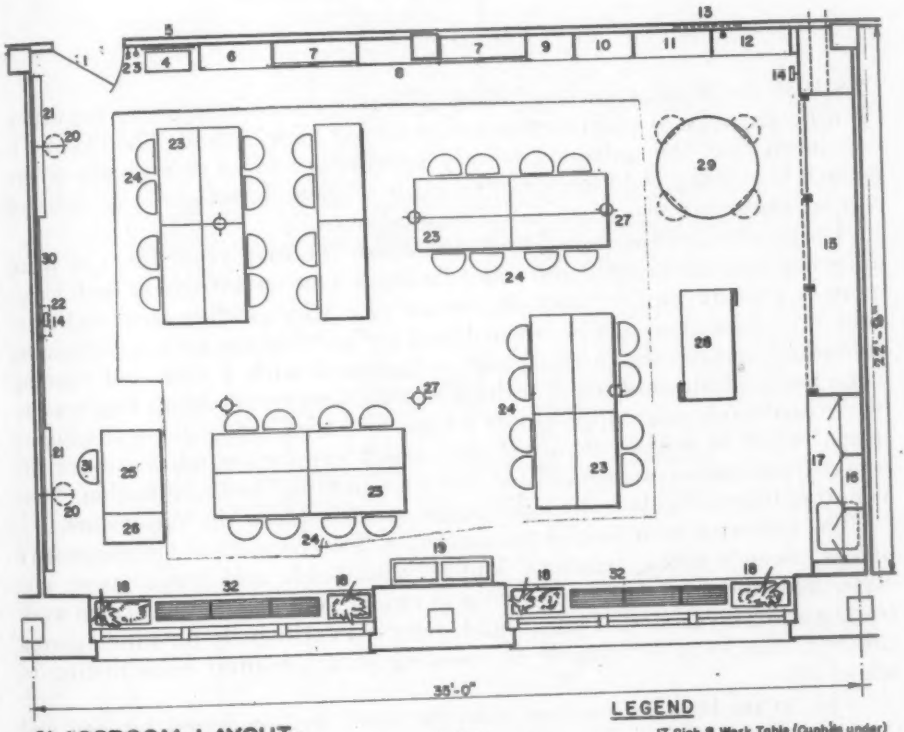
Architect Henry V. Murphy was commissioned to develop the plans for this building. Fully six months have been spent in perfecting the preliminary plans so that the final working drawings may be expedited without delays. Special attention has been paid to orientation of all spaces, elimination of waste, provision for interior travel, use of spaces by school and community. Safety, sanitation, and human comfort have received constant consideration.

The Division of Housing and Business Administration provides the architect with a manual, giving preferred sizes and characteristics of all spaces, requesting variations, however, to meet unusual local conditions. Suggestions are also offered on planning all features of the building for maximum educational use. These suggestions cover bulletin boards, display cases, exhibition alcoves, murals, maps painted on walls, and countless other details.

Architect Murphy has prepared especially for this article floor plans of the first and second floors and an elevation of the building. Administration, auditorium, gymnasium, lunchroom, and library constitute the central feature of the first floor. The kindergartens are grouped in a one-story section adjoining their playground. Play areas are set aside for the primary and older groups. The school garden is given a protective location. On the

second floor are many classrooms, including a nature study room as a special feature. The third floor (not reproduced here) has classrooms and special service facilities.

The site for this school will cost approximately $385,000.00. Such costs dictate the utmost economy in land use and necessitate a three-story structure. This new school will displace antiquated, outmoded facilities in a congested area. Public School No. 12 illustrates the effort being made by the school system and an architect to provide modern, attractive, usable school quarters in keeping with the growth and replanning of our largest city.



·CLASSROOM LAYOUT·
·ELEMENTARY SCHOOL·

·BOARD OF EDUCATION·
CITY OF NEW YORK·
DIVISION OF HOUSING &
BUSINESS ADMINISTRATION

N.L.Engelhardt Assoc.Supt.

LEGEND

1. Door
2. Light Switch
3. Classroom Bell
4. Table
5. Display Board
6. Display Case
7. Storage Cabinet
8. Fixed Display Board
9. Material Cabinet
10. Teacher's Locker
11. Book Case
12. Magazine Rack
13. Partition Sash
14. Elec. Outlet
15. Wardrobe
16. Cupboards over Sink
17. Sink & Work Table (Cupbds under)
18. Window Box
19. Terrarium & Aquarium
20. Hanging Flower Baskets
21. Chart Cabinet
22. Loud Speaker
23. Pupils Desk
24. Pupils Seat
25. Teacher's Desk
26. " File
27. Ceiling Light
28. Work Table
29. Library Table
30. Blackboard
31. Teacher's Chair.
32. Convector Enclosure

Good Schoolhouse Planning and Classroom Procedures

Foster A. Begg

In 1938 the Manhattan Beach School District did a bit of pioneering with a different type of construction for its Grand View School. The District is convinced that the unit-plan is very satisfactory for a community where growth is evident. Additions can be made without interference or delay of regular classroom procedure in existing sections.

Units one and two comprised our school the first year. Each of these units had four classrooms and toilet facilities. One entire side of each classroom is glass framed in steel. By means of a wide, sliding steel and glass door the classrooms can be opened and are continuous with an adjoining individual terrace. Each classroom is equipped with a sink and running water and a tile drainboard. The drainboard space extends into a long masonite covered work space appropriate for working with art media or displaying special work in science or other interests. Clerestory windows above the covered passageways provide for bilateral lighting and ventilation. Steel Venetian blinds regulate the light on the terrace side of the classrooms.

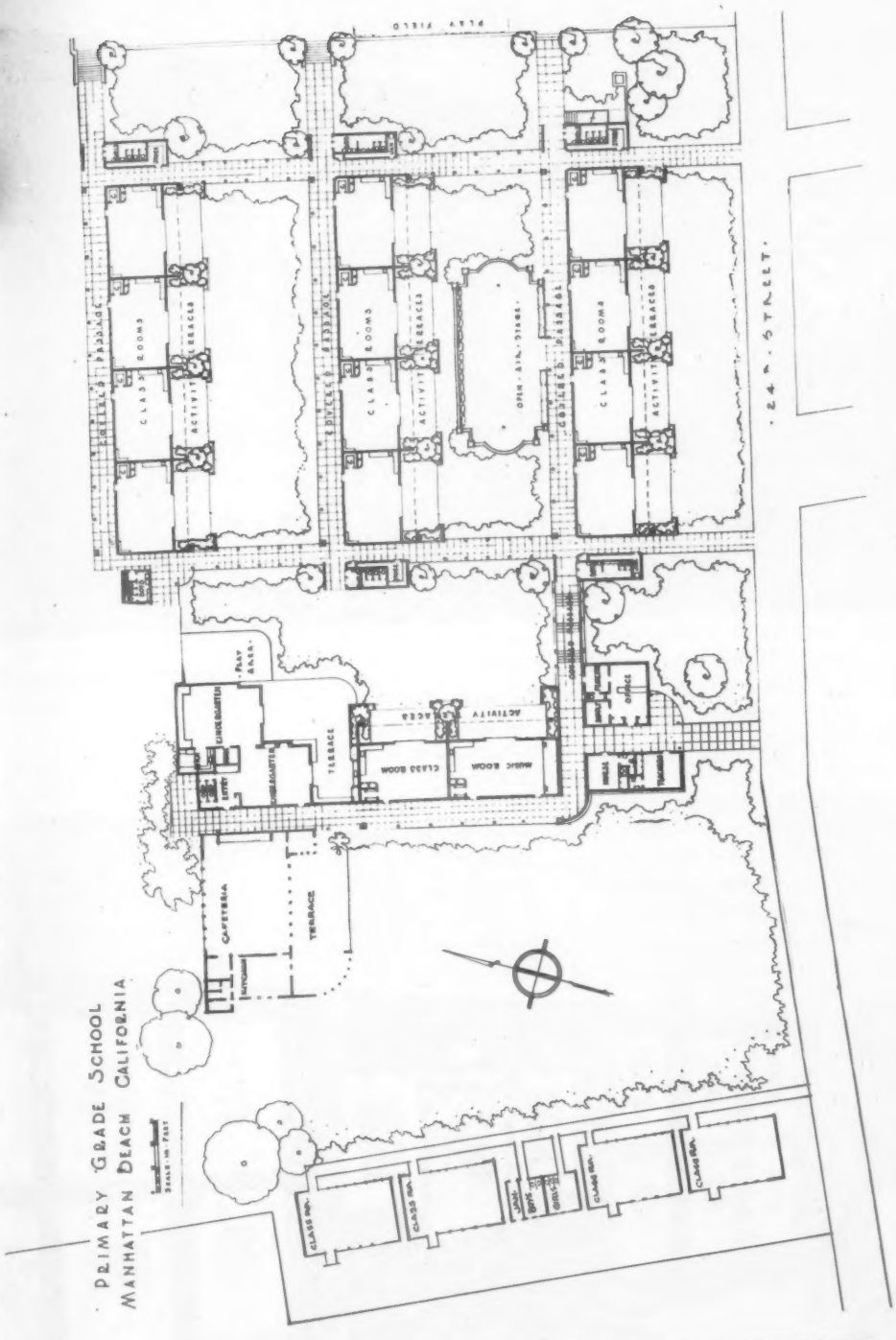
The following year unit three was built. This consists of administrative offices, nurse's room, teachers' lounge, visual-aids and music room, one classroom, and a kindergarten set-up of two large rooms, with its own work terrace and playground. This ground, reserved exclusively for kindergarten children, has been invaluable in assisting little children in adjusting to school life.

Two years later a spacious cafeteria with well-equipped kitchen and storerooms was added. The cafeteria also serves as a library and posture-training room. By postponing the building of unit number four for a period of time, the school district was spared further bonded indebtedness for its construction.

At the beginning of the war our city experienced a period of growth unequaled in its history. The proximity to several major airplane factories

Mr. Begg is District Superintendent, Manhattan Beach, California.

The author acknowledges the aid of two Los Angeles architectural firms, Wurdeman and Beckett, and Marsh, Smith, and Powell, and of the principal of the school, Mrs. Opal Robinson.


PRIMARY GRADE SCHOOL
MANHATTAN BEACH CALIFORNIA
CAFETERIA
TERRACE
CLASS ROOMS
ACTIVITY TERRACES
OPEN AIR STAGE
COVERED PASSAGE
ACTIVITY AREA
CLASS ROOM
MUSIC ROOM
OFFICE
TERRACE
24 TH STREET

On an activity terrace

Arts and crafts exhibit

and a large oil refinery made it a desirable residential area for families of men in these plants. Consequently the increased enrollment of the school put a great strain on the capacity at that time. The audio-visual and music room became a classroom but more room was needed. Immediate relief was gained by constructing two semi-temporary bungalows which were planned to carry out the general plan and appearance of the permanent structures. The following year the Federal Works Administration constructed a four-classroom unit with toilet facilities. These rooms were immediately used to accommodate the rapidly increasing enrollment.

At the present time our school plan includes six semi-temporary classrooms. In other plans of architecture these buildings would seem to offer great contrast to the permanent structures and might in reality have meant a decrease in educational opportunity and efficiency. Such was not the case, however, in our unit plan of buildings. These temporary buildings will eventually be replaced by units similar in plan and construction to the original units. This can be done without greatly disrupting the school life of the 600 children now attending this school.

In many schools capacity enrollment has brought accompanying problems of crowded halls, distracting noises, and a great increase of nerve strain to the teaching staff and children. At Grand View School these problems have not been felt because the rooms are so arranged that one group of children can pass to toilets or playground without interrupting other classes. The covered passageways leading to all rooms and to the play field have no windows and the heavy doors do not admit the normal noise of passing.

In the mild, even climate which prevails along a large bay of the Southern California coast, the close relation of indoors and outdoors in our classrooms has proved extremely successful. By sliding the large door described above, the rooms open out onto the activity terrace. Because of wise planning for east and south exposure of those terraces, they can be used during most of the school year. A teacher can supervise a group of children working in the room and another on the adjoining terrace with as much ease as if they were within four walls, and the children have the advantage of open air and sunshine while doing school work. When inclement weather makes it inadvisable to open the wide door, the children still have the advantage of working in a room, one side of which is glass. Thus dark days are actually made more cheerful with additional natural light. Shrubbery separates the terrace of one room from the terrace of the next classroom. Further privacy of groups is thus gained because the terraces of one unit cannot be observed from the terraces of another unit.

The program for our children is based on the philosophy of helping each child to develop, to the limit of his capacity, the best self for happy integrated living. The whole child is considered in our curriculum planning and in the arrangement of physical equipment of the rooms. Flexible seating with tables and chairs, and a large rug in each primary room where the groups gather closely for discussion, help to utilize better the indoor-outdoor possibilities of our school.

Convenience and Low Maintenance

E. Joe Bush

THE SCHOOL BOARD at Thermopolis, Wyoming, decided to take advantage of the government's PWA program in 1939 and construct a modern grade and junior high school, and at the present time we realize how fortunate we are.

The building is two stories high and of brick construction, utilizing glass brick wherever possible, and is trimmed with artificial stone. The structure is of the conventional "T" design. The front is 256 feet long by 60 feet wide, with the gymnasium 82 feet wide, running 108 feet to the rear. The building houses 14 classrooms, a large study hall, a lunchroom, a kitchen, and a combination gymnasium and auditorium. Provision has been made for expansion, and all rooms are above ground. Fireproof construction is used throughout with the exception of the roof over the gymnasium, which is of timber construction carried on steel trusses.

Halls and corridors are of ample width. They are floored with asphalt tile, and have a wainscot six feet high of buff glazed tile. Light is borrowed from the classrooms by use of glass brick. Ramps are used in place of stairs at the main entrance and have proved very satisfactory for quick, noiseless traffic. Ceilings throughout, except in toilets and utility rooms, are covered with sound-absorbing acoustical material.

Large steel grilles roll down from the ceiling when the gymnasium-auditorium is used for games or entertainment, shutting off the rest of the building from the public.

The gymnasium has a floor 50 by 90 feet with concrete bleachers on each side and a large stage at one end, with a 40-foot proscenium arch. Here all school assemblies and contests are held. The basket in front of the stage

Mr. Bush is superintendent of the Thermopolis, Wyoming, city schools.

The author acknowledges the aid of the architects, Goodrich and Krusmark, Casper, Wyoming.

swings up to the ceiling. The dressing rooms are under the bleachers. A large band room, beneath the stage, is finished with insulation board, rather than plaster, to absorb the sound. Noise is kept out of the rest of the building, allowing the room to be used for many purposes.

The gymnasium and toilet walls are lined with buff glazed tile to a point seven feet above the floor.

The classrooms are all equipped with "no draft" windows and individual air-conditioning units. Floors are asphalt tile, and teacher-controlled wardrobes are used in place of coat rooms.

The building is equipped with a central sound control cabinet and has a speaker in each room, which allows two-way communication. The system is often used for radio and other programs.

Natural gas is used to generate steam for heat, using a two-pipe vapor system. An instantaneous water heater furnishes abundant hot water for all purposes and is proving very satisfactory. Stand-by coal-fired equipment is in place for use should gas supply fail.

A WPA landscape project has covered the playgrounds with sand, and large areas of flagstones have been placed around each entrance to cut down the sand and dirt tracked into the building. The stone is native limestone placed on a four-inch cushion of sand. The driveway is also made of heavy flagstone.

The building is very convenient and workable, with a minimum of upkeep. There is no question but that the ramps are a great improvement over the old stairways in both speed and safety.

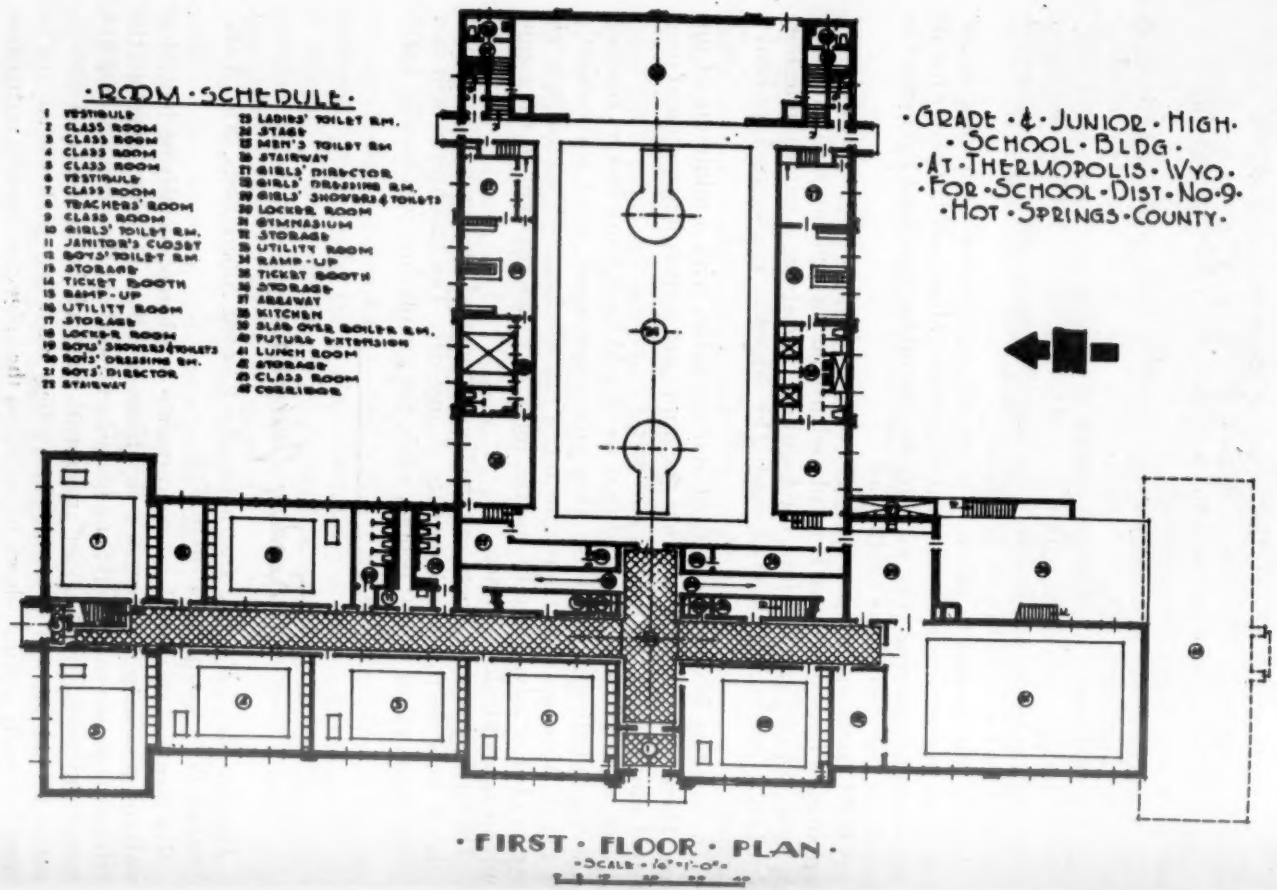
After eight years' use we find that we should have more lockers recessed in the upper halls and could use a few more classrooms, which will no doubt be added. Also, we might have arranged our kindergarten and first grade rooms to better advantage by having toilet facilities adjacent to the rooms and separate outside entrances.

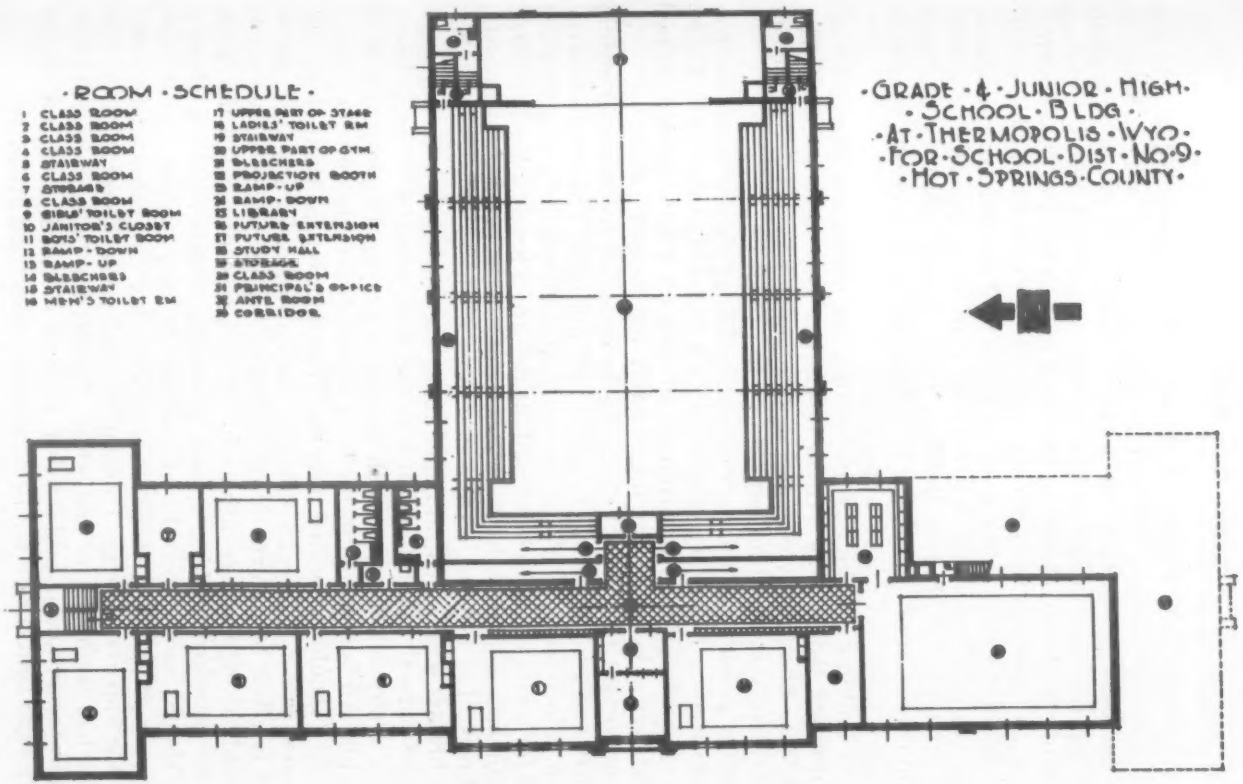
The kitchen is placed between the lunchroom and the gymnasium, which makes it possible to serve banquets of any size. The lunchroom will care for any banquet up to 250 people, while the gymnasium will handle 1,000.

Reading Instruction

Foundations of Reading Instruction, by Emmett Albert Betts. New York: American Book Company, 1946. P. 757.

The theme of this new book concerns the problem of identifying individual needs and providing for them in a classroom situation. Dr. Betts develops this with thoroughness and clarity, emphasizing throughout the necessity of differentiated guidance. From a vast amount of material, he has selected and organized his subject matter into an interesting study and guide for anyone interested in really getting "down to earth" on the subject of reading instruction. The book is profusely illustrated with attractive, informational photographs.


·ROOM·SCHEDULE·
1 VESTIBULE
2 CLASS ROOM
3 CLASS ROOM
4 CLASS ROOM
5 CLASS ROOM
6 VESTIBULE
7 CLASS ROOM
8 TEACHERS' ROOM
9 CLASS ROOM
10 GIRLS' TOILET RM.
11 JANITOR'S CLOSET
12 BOYS' TOILET RM
13 STORAGE
14 TICKET BOOTH
15 RAMP-UP
16 UTILITY ROOM
17 STORAGE
18 LOCKER ROOM
19 BOYS' SHOWERS & TOILETS
20 BOYS' DRESSING RM.
21 BOYS' DIRECTOR
22 STAIRWAY
23 LADIES' TOILET RM.
24 STAGE
25 MEN'S TOILET RM
26 STAIRWAY
27 GIRLS' DIRECTOR
28 GIRLS' DRESSING RM.
29 GIRLS' SHOWERS & TOILETS
30 LOCKER ROOM
31 GYMNASIUM
32 STORAGE
33 UTILITY ROOM
34 RAMP-UP
35 TICKET BOOTH
36 STORAGE
37 ARBAWAY
38 KITCHEN
39 SLAB OVER BOILER RM.
40 FUTURE EXTENSION
41 LUNCH ROOM
42 STORAGE
43 CLASS ROOM
44 CORRIDOR
·GRADE·&·JUNIOR·HIGH·
·SCHOOL·BLDG·
·AT·THERMOPOLIS·WYO·
·FOR·SCHOOL·DIST·NO·9·
·HOT·SPRINGS·COUNTY·
·FIRST·FLOOR·PLAN·
·SCALE·1/8"=1'-0"·



· SECOND · FLOOR · PLAN ·

· SCALE · 1/8" = 1'-0" ·

Aesthetic Values

Elise Reid Boylston

THE ROSY DREAMS of beauty combined with efficiency will soon be realized in modern schools and colleges throughout the nation. Many factors are involved in planning the artistic arrangement of the new plants. In selecting the site, sufficient playground space and lawns artistically planted with shrubbery should be provided for plenty of exercise and play. Beauty of surroundings has not only aesthetic but moral value in the training of children. Careful landscaping of the school grounds and enrichment of interiors through color and design should combine to produce an inviting, cheerful atmosphere. Modern building plans should eliminate the waste space and confusion of our prewar buildings and seek to create, instead, an air of spaciousness and fitness to purpose.

Among building materials, translucent glass blocks are decorative and furnish diffused lighting, as well as insulation from heat and cold. They also eliminate unsightly views and distracting noises. However, they are more satisfactory in localities not subject to vandalism.

Wherever possible, elementary school buildings should be on one floor with doors leading from each classroom to a recessed grassy plot. Kindergartens, especially, should be arranged to open on a fairy garden enclosed with shrubbery, where children might enjoy the song of a bird.

It is important that school entrances be designed to create an inviting atmosphere and give a feeling of dignity and welcome. This may be accomplished in numerous ways. An attractive approach might be a spot of wall prepared for a mural, an arched vestibule painted a lovely color in contrast to the main hall, or double doors directly opposite the entrance and opening into a library. The farthest wall of this room might be an expanse of high windows broken with a central panel above the bookshelves for a picture. The tomato-red wall that frames the windows is softened by Venetian blinds, and forms a pleasing contrast with the three gray-green sides and tinted ceiling, while red is repeated in the back of the shelves around the room.

The office should be located near the front door on the right of the hall, though some prefer it directly opposite the entrance. In any case, special attention is given to its artistic possibilities. A plan which allows one to look beyond the more conservative office of the secretary into the intriguing suite of the principal, picking up and accenting certain colors, is pleasing.

Halls should seem cheerful and spacious. If long narrow corridors are necessary, clever planning of details and wise choice of color schemes may decrease the apparent length. Painting the end walls darker than the sides makes the hall seem shorter and wider. Arches and bulletin boards for installing temporary murals add interest. Colored recessed panels and display cases with tube lights down the front are convenient and attractive.

Miss Boylston is supervisor of art in the elementary schools of Atlanta, Georgia.

Curved wall recesses for flower arrangements and figurines, and short corridors painted a contrasting hue, lend charm to the halls.

Illumination should be adequate. Careful attention should be given to proper lighting of school buildings, since eye care is so vital to the health and happiness of the child throughout his entire life. Neutral tones which blend with color schemes of adjacent rooms are most satisfactory for halls. Yellow is best for reflecting light and bringing the sunshine indoors.

Stair landings should have broad window ledges for flower arrangements to intrigue the passing fancy. A picture window is an asset if the view is attractive, as it is also an incentive for observation of nature.

Cluttered rooms are most undesirable and inartistic, therefore adequate storage space should be provided. Front walls should have chalkboards the proper height for children to use. In primary grades, the chalk trough should be fifteen inches from the floor. Since so much black is discordant, colored glass panels harmonizing with the wall color should be used.

A large room for art and related subjects is a definite need in the schools. Display board, painted like the walls, should cover one end of the room. Work shelves under windows serve to cover radiators and provide extra cabinets. There should be electric outlets, a sink, slanting composition board for easel work, and adequate storage space. The walls should be neutral as a background for children's work, with color accents in cabinets.

Since color influences mood, its use in schools should be carefully planned. Warm colors counteract the cheerless light of a north room, and cool colors temper strong light from the south.

Cafeterias and lounges may have quite unusual color schemes, with wallpaper added for interest. Clinics should have cool, soothing colors. For classrooms, brilliant reds and yellows are aggressive hues and stimulate imagination and originality; while cool colors are restful and induce clearer thinking; however, the softer hues are always safer. Bulletin boards may be painted in lovely colors for interest and for pleasing backgrounds.

The amount of illumination available determines the color value. Medium to light hues are best; but with abundant lighting, deep cool colors are used. For natural lighting, windows should come to within six inches of the ceiling. Coolite and solex glass reduce heat and glare, and give a soft diffused light. Actinic glass has the stimulating effect of sunlight. Fluorescent light tends to wash out color, so slightly darker values are used on walls. Semi-gloss paint is best for light reflection, and flat paint for light diffusion.

These and many other ideas are being discussed for the various types of schools that will be built. Forward strides are desirable; but initial cost and increased maintenance as well as redecoration of delicate colors must be carefully considered. Certain standardized color schemes may be adopted and selected, with greater freedom of choice in libraries, cafeterias, lounges, auditoriums and offices. Old schools may be modernized by use of new materials. Though some schools may not be as pretentious as others, aesthetics will play a larger part in postwar planning than ever before. In the modern schools children will have a happier, lovelier place in which to work, to play, and to grow into gracious citizens of our world.

Designed for Living

Georgia Hensley Lacey

THE ELEMENTARY SCHOOL of tomorrow will be a center in which both the child and the adult population of the community may have rich and full experience in the art of living. Operating day and night twelve months in the year, it should be designed to meet individual and group needs on both child and adult levels. Efficiency, practicability, and aesthetic appeal to all the senses are guiding principles in planning. Though expensive to construct and equip, care in initial outlay can result in lasting financial economy, incalculable human satisfaction, and improved solidarity in family and community.

Ideally a school should be located on an elevation with an inspiring view—the bend in a river, distant hills, or the panorama of the city below. When it must be built within a metropolitan area, every foot of ground available should bring returns. Skillful landscaping of even small grounds, using shrubbery, evergreens and trees to screen off the noise and confusion of city life, will give a sense of intimate living with the out-of-doors so lacking in the experience of city children. An artificially constructed brook or pond stocked with native water life in a transplanted woodsy bit with ferns and wild flowers, can enhance the oasis mood. The grassy playground, remote from the classroom sections of the school, will be bordered with the children's own gardens. Here practical vegetables appear, and also bulb and seed plantings for experimental painting with nature's splashy flower colors and experimental blending of nature's elusive perfumes, an ancient Chinese art. Community family garden plots should adjoin the school grounds to benefit by expert guidance programs. The playground, used by both children and adults, should have facilities for baseball, volley ball, and other athletic activities. There should be a parking space and a private drive to sheltered side doorway for loading and unloading children from cars and busses.

Harmony with the landscape, stability, and a feeling of timelessness are achieved when the building is constructed of native stone and fireproofed native timber. Lodges in national parks illustrate the resulting beauty. For instance, varying sizes of scrap limestone from Indiana quarries form a wall as beautiful as tapestry in design and in the play of light and shadow on its irregular surface.

The building itself should be a single story, simple in effect and perfectly balanced in design, with the main entrance the center of interest. All children's activities will be provided for on the ground floor. The basement areas will be used for activities of interest to adults only, to heating and air conditioning plants, and to storage space.

Though more expensive to construct, the quadrangle building with wings at the corners for additional rooms as needed, and access to an open inner court by means of four continuous inner corridors, has very definite advan-

Mrs. Lacey is principal of Whittier School No. 33 in Indianapolis, Indiana.

tages. These are: ease of circulation of large numbers of children to all special activity centers and maximum utilization of sunlight, since all classrooms are outside rooms and corridors are well lighted from the court. A cloister-like loggia with wide arches on the four sides of the court will give architectural charm, will be a source of illumination at night, and will serve as shelter for outdoor recreation in rainy or very hot weather. The court should be landscaped with a fountain and sculptured child figures.

The administrative units flanking the main entrance should consist of a reception room serving the principal's office, the assistant principal's office, a phone booth, and a secretary's room equipped with ditto machine, mimeograph duplicator, mimeoscope, paper cutter, and typewriters of various sized type. Necessary filing drawers, storage cabinets, and bookshelves should be built-in features accessible to all workers. The service center should have its waiting room and lavatory in connection with the medical center, nurse's room, dental room, and office for social worker, psychologist, and psychiatrist.

Glass brick partitions solve the problems of privacy and illumination. The psychological effect of beautifully appointed teachers' rest rooms is a factor in maintaining good faculty morale. A new feature in education but a highly important center will be the production studio, engineered for successful broadcasting. Here will be installed the control cabinet of the public address system, the equipment necessary for the school's FM (frequency modulation) station and connections with local commercial broadcasting stations. This room will also serve as the listening library with storage space for transcriptions. Small sound-proof booths for individual listening should line one wall. These same booths should open also from the adjoining orchestra room and should be used for instrumental practice. Glass doors for both entrances to the booth will aid the teachers in supervising the children at work there. The sound-proof orchestra practice room should have storage cabinets for musical scores and school-owned unusual instruments such as the flute, French horn, bassoon, harp, drums, and bells. Adjustable music racks and chairs of varying sizes are desirable.

Completing the administrative center will be a room scheduled for committee meetings such as the children's student council, the press club and the school paper staff, the traffic patrol, and the service clubs; the many teachers' committees; the adult activity committees, such as those directing the mothers' chorus, the dramatic society, the athletic program, the social, vocational, music, lecture, Red Cross, and other interests; the P.T.A. board.

A large, well-lighted, beautifully designed library must be equipped to serve all ages. The children's books, selected with extreme care to serve definite purposes, must be a permanent collection. Books on the adult level could be furnished by the city's circulating library system effecting economy in space, servicing, and financial outlay and yet providing never-ending variety of material.

Across the court, opposite the main entrance, will be located the auditorium with ample dressing rooms behind the stage. Flanking it will be the gymnasia and children's rest rooms. The auditorium should have a sloping

floor with permanent seats and sufficient capacity to accommodate the entire school enrollment. This is one of the most effective ways of unifying the school and promoting school spirit. A smaller assembly room has often proved to be inadequate for community needs. The auditorium must be acoustically engineered with sound amplification perfected. The stage needs to be of sufficient size with lighting and equipment adequate for legitimate productions and pageants. A piano and electric organ are desirable.

The swimming pool, built under the auditorium, will be connected by ramps with dressing rooms and showers serving also each gymnasium.

The cafeteria and kitchen will be used frequently by community groups. Collapsible tables will provide space for children's after-school activities. There should be a small dining room for teachers.

One of the most popular sections of the school for both children and adults will be the area given over to vocational work, crafts and fine arts. Let us keep all ages in mind when planning their equipment. The shops for wood, electrical, mechanical, and metal work may interest both men and women. The home economics department will have a kitchen planned on the unit system, each unit having its own dining table, stove, sink, cabinet with worktable, cooking equipment and dishes—all in matching colors. There will be a model living room, a dining room, a discussion center, and sewing room with electric sewing machines, iron, mangler, cutting table, work tables and ample cabinet space. The crafts room will feature a circular table and plenty of storage space for supplies and individuals' unfinished projects. Desks which can be transformed into easels, good lighting for models and displays, and bulletin boards for exhibits are necessary in the fine arts room.

The kindergarten and primary rooms will need to be spacious. Above the primary grades where much of the day's program is developed on the cooperative plan, each classroom will become a center for an area of interest—for English, social studies, science, mathematics, music, and reading. These rooms can be somewhat smaller than usual, as fortunately the trend is toward smaller classes. Special centers, already described, take care of special activities. However, every classroom should have a small soundproof adjoining workroom with glass doors so that the teacher may know how the work is progressing there at all times without having to leave the activities in the main classroom. The workroom should be large enough to house sizable projects built by the pupils, such as a model dairy farm, an experiment in building canal locks that actually work, an electrical map, and the like. This room should have a work bench and storage facilities for tools, nails, paint, wall board, and light lumber. We have thus provided a place for construction and eliminated the problems of clutter, noise and apparent confusion which interfere with regular class procedure and the orderliness and beauty which should be an intrinsic part of every room.

The classroom itself should be equipped with individual lockers for children's wraps and another set of smaller lockers for their supplies, flanked by cabinets for the teachers' wraps, room supplies and built-in deep filing cabinets. Bookshelves, bulletin boards, and ruled chalkboards

must all be placed with the age of children to be served in mind. Practically all the outside wall of each room should be of glass, the windows extending from floor to ceiling to bring the out-of-doors with its greenery and flower color into the room and provide a natural mural decoration of ever-changing interest and beauty. Each room should have its own exits—one leading directly to the grounds not more than one step down, the other leading to the corridor. There should be thoughtfully designed arrangements for growing plants and animal pets. All furniture must be movable.

Let us not fail to take advantage of the use of wood instead of metal in the classroom, since science now makes it available in fireproof and wear-resistant form. The sensory appeal of wood both to eye and touch should not be overlooked. All finishes should be dull, the tones of stain—gray, green, blond, brown—harmonizing with the muted delicate colors used for the painted walls of the various classroom units.

Sound-eliminating construction material throughout is an absolute essential. Even temperature provided by means of heat emanating from sub-floor system will dispense with unsightly and noisy radiators. Complete insulation results in economical heating and is basic to successful air conditioning so that the plant may be in continuous operation the year round. Indirect lighting will provide evenly distributed illumination. There must be provision for darkening every classroom and assembly area, and plenty of electrical outlets, for such teaching aids as the sound moving picture projector, the kodascope, and opaque projectors. New germ-killing health lamps and washed air will pay quick dividends in general physical well-being, resulting in good attendance. The newly publicized device for control of dust will bear consideration. Synchronized electric clocks and a good system of bells are basic to efficiency. A fine, mellow-toned bell or group of mission bells in the court would give atmosphere if rung at the beginning and end of the day's sessions.

The basement can be made absolutely moisture proof by sub-floor tiling and walls treated with chemicals. This part of the building, reached by ramps, is to be devoted entirely to adult interests. Here there should be a lounging room, rest rooms, game rooms, a bowling alley, table tennis equipment, a photographic dark room, and dance floor with platform for small orchestra and a fine victrola with amplified sound and microphone.

The corridors surrounding the court perform a very important function if devoted to display. The corridor entered from the main entrance on the side of the court occupied by the administrative offices should exhibit original paintings, both oil and water color, by recognized artists and classic and modern sculpture placed in lighted niches. The corridor outside of the auditorium should display, in show cases and under glass as in art galleries, work by the adult classes. These may be examples of oil, water color, etchings, wood block printing, photography, carving, jewelry, and larger objects made in the vocational centers. The two remaining corridors should display their handicraft, their hobby and museum collections.

Can we thus set the stage for life that can be made rich in experience, full of interest, and complete in personal satisfaction?

The School of Tomorrow—

According to Classroom Teachers and Principals

THE DEPARTMENT OF ELEMENTARY SCHOOL PRINCIPALS and the NEA Research Division sent a questionnaire to a random selection of 125 principals and 63 classroom teachers (names were suggested by the Department of Classroom Teachers) to find out what building facilities they believe should be provided for a modern elementary-school program. Fifty-seven principals and 16 teachers sent replies in time to be included in this summary. This sampling is not large enough to reveal statistically significant differences between teachers and principals, replies from different regions, or from schools of different sizes. Therefore all replies are summarized together.

The first part asked, "Assuming a fairly typical school (enrolling 500-800 pupils), *how essential do you consider the following types of rooms and facilities in providing a modern elementary-school program?*" The replies follow:

	Per cent Voting		
Type of Room	*Useful, not necessary*	*Very desirable*	*Absolutely essential*
1. A first-aid room and clinic	4%	23%	73%
2. A lunchroom (with cooking facilities)	10	33	57
3. An auditorium (for all or majority of pupils)	0	29	71
4. A gymnasium (and indoor play space)	4	22	74
5. A lounge and rest room for women teachers	1	19	80
6. A library room (for 100 or more pupils)	4	37	59
7. A teachers' workshop (where teachers can construct aids, prepare stencils, make charts, etc.)	18	53	29
8. A teachers' library room	33	63	4
9. A practical arts room (construction, etc.)	18	52	30
10. A homemaking room (sewing, etc.)	27	46	27
11. An art room (drawing, painting, etc.)	17	46	37
12. A music room	7	44	49
13. A science laboratory	25	53	22
14. A parents' room (for conferences, small meetings, study, etc.)	23	49	28

Space was provided on the blank for writing of other items. Among the items suggested by principals and teachers, the following were mentioned five or more times as indicated in parentheses:

Equipment for audio-visual education program (19)
Storerooms and storage spaces of various kinds (12)
Rooms for special education, various kinds mentioned (mentally retarded, speech correction, sight-saving, remedial reading, nursery school) (9)
Private office for principal (5)
Showers or bathtubs (5)
Large, shaded playgrounds and garden space (5)

In Part II of the blank the question was, "If you were asked to design a

modern elementary-school plant, what is the *one* thing (room, arrangement, or facility) you would be sure to include in the layout?"

	Frequency of mention
More classroom space per pupil (to allow for work room or work area for each room)	19
Adequate storage facilities of different kinds in each classroom	18
More indoor and outdoor play and recreation space, including an independent gymnasium	18
Separate auditorium, equipped for using visual aids of all kinds	10
All rooms on one floor, separate entrances for each room or each two rooms (or at least all primary rooms on first floor)	8

Among the specific facilities listed in Part II were the following:

	Frequency of mention
Better toilet facilities for pupils and faculty, especially separate toilets for each classroom	11
Sink, hot and cold running water in each classroom	9
Soundproof and acoustical treatment of walls and floors	8
Special arrangements for art, music, dramatics, speech correction, sight-saving, etc.	7
Large bulletin boards in each room	6
Good lighting, including light on chalkboards	6
Library—beautifully decorated and completed equipped	6
Better heating and ventilation (with provision for heating gymnasium and auditorium separately)	6
Cloakroom for each classroom	5
Office for principal	5
Drinking fountains in each room	4
Adjustable seating	4
Display cases (museum if possible)	4
Proper exposures for all classrooms	3
Provision for crippled children (ramps, special rooms, special seating)	3

A number of rooms for special purposes were mentioned only once or, in a few cases, twice. They included the following: model dining room; club room; storage rooms for books, supplies, stage scenery and costumes; teachers' lunchroom; conference room (for pupils needing special attention); and custodian's office.

Specific features of the rooms or buildings as a whole that were listed were as follows: beautiful and inviting entrance, small stage in kindergarten, electric outlets for visual aids in all rooms, windowsills on pupils' eye level, signal lights that could be left lighted instead of bells, public address system, visual equipment for each classroom, television and broadcasting equipment, and linoleum floors.

The importance of choosing the site wisely was mentioned specifically or implied in a number of responses. It should be large enough so that future expansion of the building need not be made at the expense of play areas; it should be well drained, and graded for the uses to which it will be put. Easy access to the building for the sake of handicapped children was mentioned in connection with the site.

The care needed in grouping the rooms was mentioned in different connections by several of those who responded to the questionnaire. It was thought desirable to place together in one part of the building all the pupils who were nearly the same age so that they would use the same entrances and their teachers might more readily exchange materials used in common. Special rooms should be so placed as to be easily reached from all parts of the building. Furthermore, to facilitate the use of the building by the community, it was suggested that the auditorium, gymnasium, and library in particular should have separate outside entrances or be so placed that they could be used without going through other parts of the building. For the sake of ease of supervision it was suggested that stairways, fire towers, and toilets—the parts of the building not regularly assigned to anyone for supervision—be placed where they were easily seen by teachers or administrators in their rooms and offices.

April—Cancer Control Month

President Truman has added his influence to the fight on cancer by proclaiming April as Cancer Control Month. He has urged "the medical profession, the press, the radio, the moving picture industry and all agencies and individuals interested in a national program for the control of the disease of cancer by education and other cooperative means to unite during this month in a public dedication to such a program and in a concerted effort to impress upon the people of the nation the necessity of that program."

The American Cancer Society, 350 Fifth Avenue, New York 1, New York, is launching an active campaign for a nation-wide program in the public schools. The Director of School Service of the Society is Mr. H. B. Fish. Publicity materials will be furnished to all who are interested in pushing this plan for the fight against cancer. The importance of beginning cancer control education in the elementary school is emphasized:

1. We must make organized education mindful of this great human need.
2. We must make organized education understand its responsibility.
3. We must make individual educators assume their personal responsibility.
4. Cancer control training in the grades must be universal.
   (a) The schools must have properly trained teachers.
   (b) They must have the best possible literature.
   (c) They must be shown how to develop adequate projects.
   (d) They must be given proper incentives. This means contests, prizes, awards, publicity.
5. Training in the high school must successfully *prepare students* for college work in science far better than has ever been done.

Funds for this school program would be made available through the Society, the money to be expended under a plan meeting uniformly high standards throughout the nation. Help would also be given in the training of teachers in service, either providing for summer school work or for study during a full year's leave of absence.

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LOUISIANA
C. E. Laborde
State Capitol,
Baton Rouge 4

MAINE
William O. Bailey
State House, Augusta

MICHIGAN
Wilfred F. Clapp
Capitol Building
Lansing 2

MINNESOTA
I. O. Friswold
State Office Building
St. Paul 1

MISSISSIPPI
W. G. Eckles
Old Capitol Building
Jackson

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Concord

NEW JERSEY
Seymour Williams
Trenton 8

NEW YORK
Don L. Essex
Albany 1

NORTH CAROLINA
W. F. Credle
Raleigh

NORTH DAKOTA
Paul A. Dalager
State Capitol, Bismarck

OREGON
D. A. Emerson
State Library Building
Salem

PENNSYLVANIA
Hubert C. Eicher
Harrisburg

TENNESSEE
H. C. Headden
War Memorial Building
Nashville 3

TEXAS
A. B. Martin
Austin 11

VERMONT
Carl J. Batchelder
Montpelier

VIRGINIA
Arthur E. Chapman
State Office Building
Richmond 16

WASHINGTON
Elmer L. Breckner and
Frank L. Sincock
Old Capitol Building
Olympia

WEST VIRGINIA
John Marshall
State Capitol
Charleston 5

WISCONSIN
H. W. Schmidt
Capitol, Madison 2

WYOMING
Raymond S. Orr
Capitol Bldg., Cheyenne

Sources of Information

1. *Interstate School Building Service, George Peabody College, Nashville, Tennessee.*
   This service consists of the directors of school plant divisions and their assistants in sixteen southern states. The service has issued a number of bulletins and in 1945 conducted the first workshop on the school plant.[1]
2. *National Advisory Council on School Building Problems.*
   The Council was organized under the auspices of the U. S. Office of Education. It collects data on methods of solving school building problems in different places and under different organizations. The data are expertly analyzed and constructive suggestions are made for solving school building problems.[2]
3. *National Bureau of Standards, Department of Commerce, Washington 25, D.C.*
   The Bureau of Standards was established by the Act of Congress approved March 3, 1901. It works on the development of engineering and safety codes, recommendations for simplified practice, and commercial standards of performance and quality.[3]
4. *National Council on Schoolhouse Construction, Secretary, James L. Graham, State Department of Education, Tallahassee, Florida.*
   The Council is made up of federal, state, county, and municipal directors of schoolhouse planning and their assistants. Its purpose is to make available to the public and school officials the information on school buildings which may be of value.[4]
5. *School Plant Research Council, a committee of the American Council on Education, 749 Jackson Place, N.W., Washington 6, D.C.*
   The Council was organized in 1935 to study problems relating to the building and operating of efficient and financially sound school plants.[5]
6. *American Institute of Architects, 1741 New York Avenue, N.W., Washington 6, D.C.*
   An organization of professional architects.
7. *American Society of Heating and Ventilating Engineers, 51 Madison Avenue, New York 10, N.Y.*
   Issues standards for heating and ventilating systems.
8. *American Standards Association, 70 East 45th Street, New York 17, N.Y.*
   Publishes *Approved Standards*, a list of standards available in printed form and approved for national use, many of them applicable to schools.
9. *Illuminating Engineering Society, 51 Madison Avenue, New York 10, N.Y.*
   Advances the theory and practice of illuminating engineering and publishes information relating to the field.
10. *National Board of Fire Underwriters, 85 John Street, New York 7, N.Y.*
    Issues a code for public buildings on construction, alteration, equipment, repair, and removal of buildings.
11. *National Recreation Association, 315 Fourth Avenue, New York 10, N.Y.*
    Has assembled material on standards for playground apparatus and space requirements for game areas.

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[1]Interstate School Building Service. *Community School Plans.* Nashville, Tenn.: the Service, 1944. p. 1. (Introduction–unpaged)

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[2]Barrows, Alice. *Functional Planning of Elementary School Buildings.* Office of Education, U. S. Department of the Interior, Bulletin 1936. No. 19. Washington, D. C.: Superintendent of Documents, Government Printing Office, 1937. p. vii.

[3]U. S. Department of Commerce, National Bureau of Standards, *Functions and Activities of the National Bureau of Standards.* Washington, D. C.: the Bureau, June 1939, p. 1–3.

[4]National Council on Schoolhouse Construction. *Proceedings of the Twenty-First Annual Meeting, 1943*, Tallahassee, Fla.: State Department of Education, 1944. p. 55.

[5]American Council on Education. *School Buildings and Equipment.* Studies, Series I, Vol. 3, No. 8. Washington, D.C.: the Council, 1939. p. iii.

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D. E. S. P. News

EIGHTH ANNUAL CONFERENCE ON ELEMENTARY EDUCATION

Many reservations for the conference to be held at Syracuse University July 8-19 have already been received. Be sure to send your deposit of $5.00 to us soon, so that you will be among those first 165 to be housed in the dormitory.

BUFFALO MEETING

Department meetings will be held in Buffalo, New York, on July 1, the day preceding the opening of the NEA Representative Assembly. The complete program will appear in the June issue of this bulletin.

SCHOOL BUILDINGS

Many cities are planning new elementary school buildings. The NEA Research Division assisted the Department in preparing this April issue, which is devoted entirely to the subject, BETTER ELEMENTARY SCHOOL BUILDINGS. Additional copies are available at 35 cents each.

TOPICS FOR FUTURE BULLETINS—A REQUEST

What subjects would you like to see discussed in our bulletins next year? We are preparing a list of tentative topics to present to the officers when they meet this summer, and are coming to you—our members—first, for your suggestions. This is YOUR publication—let us hear from you promptly!